# Soap

## MEN IN WHITE

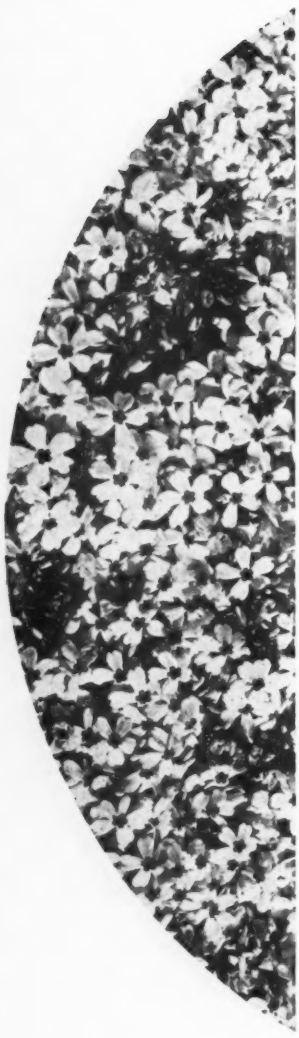
The Ungerer Men in White are ready to help you. First, our analytical laboratories, to assure your getting quality raw materials. And second, our perfume laboratories to create THE perfume for your soaps. Let our Men in White, our chemists, help you.

**UNGERER & CO.**

13-15 West 20 St. NEW YORK

# nd Sanitary Chemicals

# Soap Perfumes



ODOR is perhaps the most important factor in the successful merchandising of toilet soaps. Competition being what it is today, the up-to-the-minute soap manufacturer is insisting on the very best possible perfume available, at a price within reasonable limits.

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(Patent Applied For)
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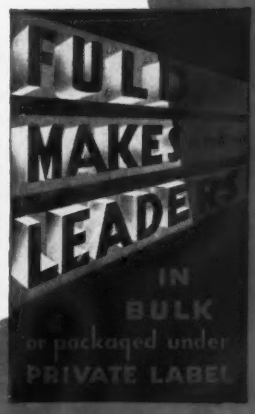


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***-an unbeatable combination***

# Soap and Sanitary Chemicals

Volume XV
Number 5

MAY
1939


## Contents


- Editorials ..... 19
- Which Soaps Sell? ..... 21
- Soap Texture—(Part II) ..... 24
  By Harold Silman
- U.S.P. Soft Soap ..... 27
- Soap Specifications ..... 28
- Unloading Liquid Caustic ..... 31
- Fatty Acid Distillation ..... 57
- Mosquito Control ..... 94
  By Duncan E. Longworth
- Insecticides and the Dealer ..... 97
- Derris Stability ..... 103
  By Robert D. Chisholm
- White Shoe Cleaners—(Part II) ..... 107
  By Charles S. Glickman
- Contracts Awarded ..... 45
- New Trademarks ..... 47
- Raw Material Markets ..... 51
- Raw Material Prices ..... 53
- Products and Processes ..... 60
- New Equipment ..... 63
- New Patents ..... 65
- Classified Advertising ..... 131
- Advertisers' Index ..... 136



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SANITARY Products Section, which forms a part of every issue of SOAP, begins on page 71.


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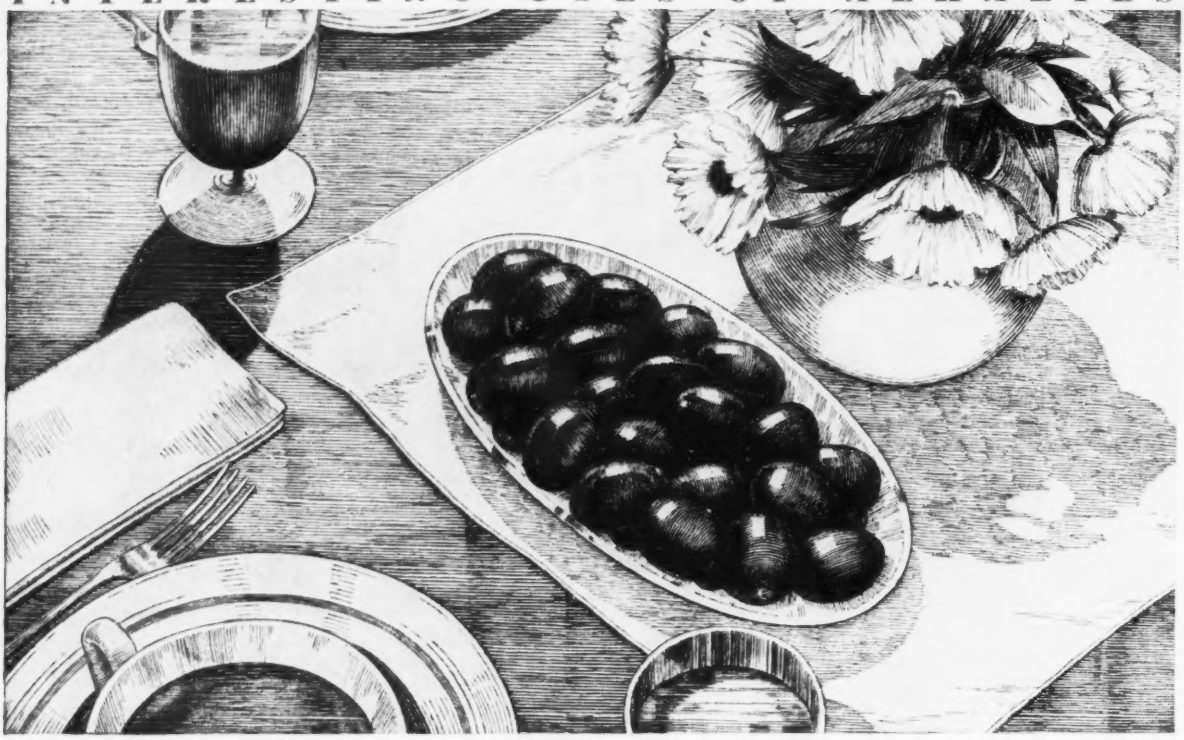

# To Make Ripe Olives Edible

The extreme bitterness of freshly picked olives is scientifically removed by a curing process which includes several baths in solutions of caustic soda. First, the olives are graded for size, then soaked in brine for three weeks to harden the fruit tissue and develop flavor. Then comes the first alkali bath, which for the Mission and Manzanillo varieties of ripe olives consists of a solution of 1¼ to 1¾ ounces of granular 76% Caustic Soda per gallon of water. The Caustic is then leached out and the fruit darkened by oxidation. Usually, three or four subsequent baths in weaker caustic solutions follow. The first solution is allowed to penetrate the skin only, but the final one reaches clear to the pit. These Caustic Soda treatments, not only remove the bitterness but they also intensify the color.

Anyone could live without olives, if necessary, but many of our large industries could not exist without Caustic Soda. Columbia is prepared to meet the most exacting specifications of Caustic Soda users whether flake, ground, solid, or liquid is required. A recent development is Columbia 73% Liquid Caustic Soda shipped in insulated tank cars protected on the inside by a patented coating which prevents contamination by heavy metals during shipment. Columbia welcomes the opportunity of discussing your Caustic Soda problems.

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*Manufacturers of Soaps, Floor Waxes, Polishes, Cleansers, Disinfectants, Deodorants, Insecticides.*

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# TETRA SODIUM PYROPHOSPHATE KEEPS IRON IN SOLUTION

## Prevents Wash from Becoming Yellow and Drab

IN THE home, in the commercial laundry, even in industrial plants, the presence of iron in the wash water has long been a difficult problem to overcome. In these iron water districts, soap containing sodium pyrophosphate will be particularly welcome.

It has been found that pyrophosphate has an outstanding capacity to keep iron in solution. One ounce of anhydrous tetra sodium pyrophosphate in a gallon of water at 40° C. will hold in solution as much as .25 ounces of iron oxide. The mere presence of pyrophosphate effectively prevents iron in the water from depositing in and discoloring the fabrics being washed. In many cases this makes all the difference between a brilliant white wash and one that is yellow and drab.

Anticipating the demand for tetra sodium pyrophosphate as a soap builder, Victor developed an improved manufacturing technique . . . built the largest plant of its kind in existence today . . . was first to meet the demand for a product of uniformly high quality.

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VICTO

# IRON REPRESSIVE ACTION DEMONSTRATED BY THIS SIMPLE TEST

The beaker on the left contains a ferrous sulphate solution equivalent in strength to 20 parts per million of Fe. To this has been added 2 cc of N/3 caustic soda solution to each 1000 cc of the iron solution. As a result the ferrous sulphate has been oxidized and precipitated as ferric hydroxide. The solution is turbid as evidenced by the illustration.

The beaker on the right contains the same iron solution and the same amount of caustic soda. The only difference is that 10 parts per million of anhydrous tetra sodium pyrophosphate have also been added. No turbidity is evident. The pyrophosphate keeps the iron permanently in solution. The advantage thus obtained in washing fabrics is obvious.

HEADQUARTERS FOR...

# pHosphates

*"But, mamma, I don't see why you got so mad. When you said you weighed 160, all I said was, 'That's not very much—it's only about a twelfth of a ton.'"*

Speaking of tons, why not try a ton of that good

**NIAGARA CARBONATE OF POTASH?**

*—or a ton of Niagara Caustic Potash or Caustic Soda.*

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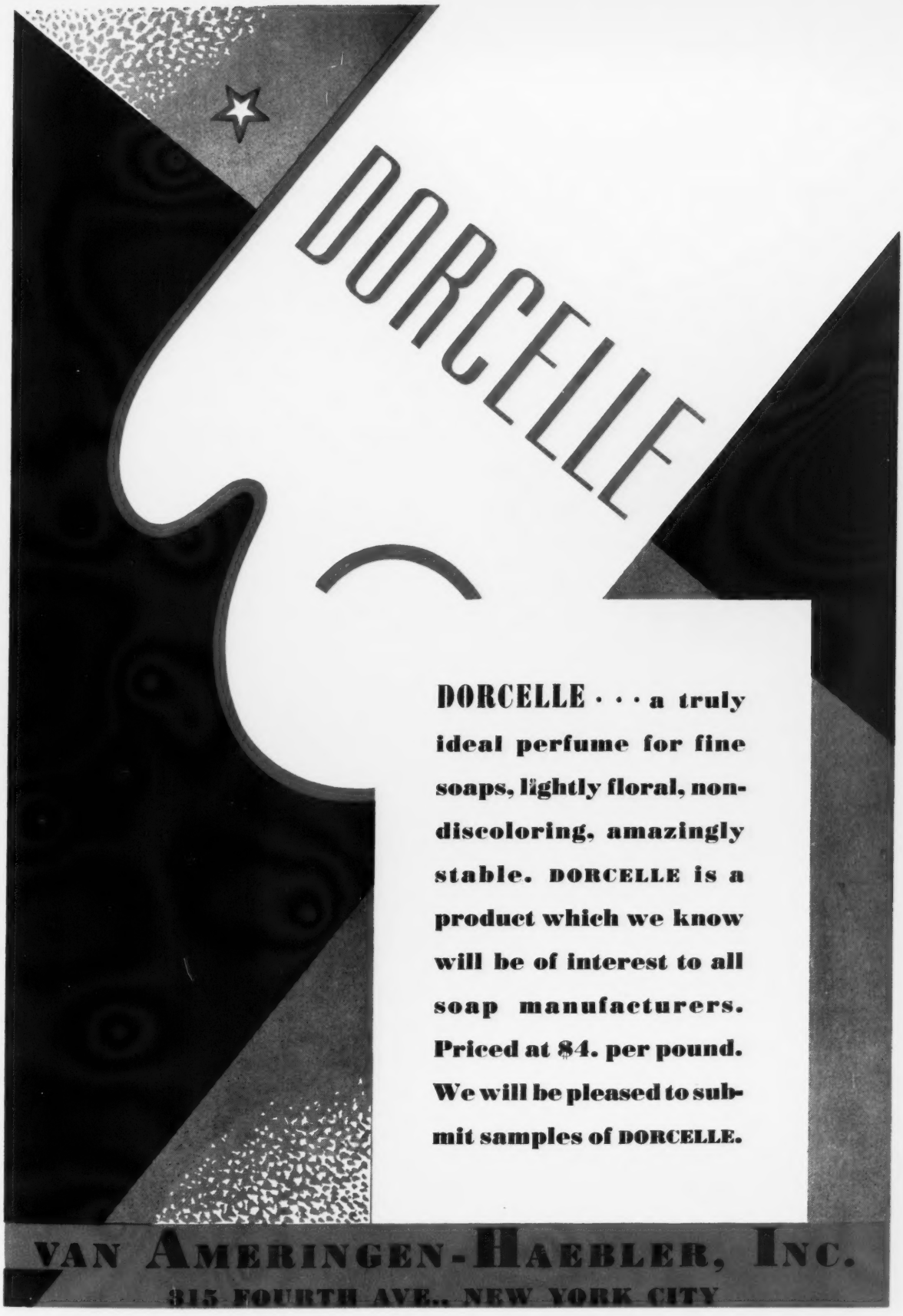
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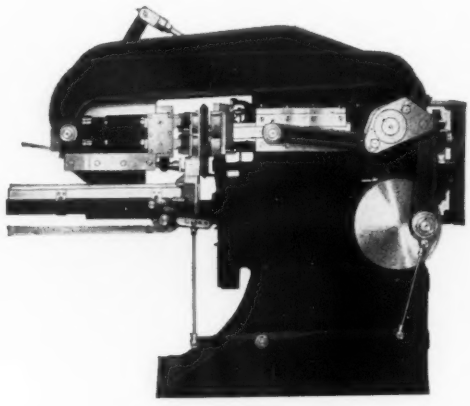
315 FOURTH AVE., NEW YORK CITY

# *All* JONES PRESSES *are good*

## . . . *But* there comes a time when even they, after ten or fifteen years gruelling labor, operating from 1 to 3 shifts daily, are

## *FINALLY WORN OUT*

STRAINED, cracked and rusted, with shafts, bearings and plungers worn out of all form and accuracy, their operation costs more than it is worth. No human contrivance will last forever. Don't expect the impossible. Don't waste money trying *to repair* a machine that is *worn out* from driving shaft to offtake. It costs more to make such a machine work right, temporarily, than to install a new one, one that will last much longer than the old would though new and do a class of work never before attainable. Perfect pressing is the style in both laundry and toilet soaps. Though you have an old type press in good condition it would still pay you to install in its place a new model TOGGLE OPERATED PRESS, for greater economy, noiseless, nerve-saving operation, plus far better looking and more salable soap.



Type K Laundry Soap Press

## R. A. JONES & COMPANY, Inc.

P. O. Box 485 Cincinnati, Ohio

The Standardized *Constant Motion Cartoner* packages, bottles, jars, tins, collapsible tubes and many other articles It feeds, folds and inserts direction sheets and corrugated board liners with the loads.

# As the Editor sees it..

A MINIMUM of forty cents per hour for a forty-hour week is the wage figure set by the U. S. Department of Labor for the soap industry under the Walsh-Healey Act, which covers wages paid in plants on contracts supplying the Government with materials. The connection of this new minimum wage scale with the Walsh-Healey Act is of minor importance to the rank and file of the American soap industry. Its importance rather is as a definite wage level minimum set by the Department of Labor for the soap industry which may stand as a precedent for more important things at some future date. Incidentally, no consideration was given by the board in its report to geographical differences in wage levels, nor was any special treatment accorded to workers on light tasks. SOAP is advised that a dozen or more of the smaller firms bidding on government contracts will be adversely affected if some tolerance is not allowed light task workers. They have so advised the Department of Labor.

FOR a time at least, there will be no increase in the excise tax on coconut oil and other imported oils and fats from three to five cents per pound. The proposal was killed shortly after we went to press last month. Its demise was probably just as much a relief to the Administration in Washington as to the soap industry and other oil and fat consumers. It seems inconceivable that those in Congress who attempted to jam through this tax increase as a rider on an altogether foreign piece of legislation, could have been as wholly inconsiderate of embarrassment to the Government as they appeared to be. Could this, after all, have been another political grandstand play to the folks back home in the cotton and dairy belts who are never pleased when oil and fat prices are too low? But, be that as it may, the soap industry can make up its mind that this higher tax proposal is not dead, and that it will be brought up again at the first opportunity.

WHAT about these manufacturers who sell to the jobber and also sell large consumers direct? Last month, we published the report of a complaint from a jobber on this subject. He remarked as how he had searched for years to find a manufacturer of soaps, cleansers, and allied products who sells only to jobbers, and as yet had been unsuccessful in his quest. He asked us how come this was the case,—and we in turn, asked the same question editorially. Now, we wish that we had restrained our impulse and kept quiet.

Down upon us from the hinterland has come the claim of various and sundry manufacturers that they sell only to jobbers,—and where do we get off intimating otherwise. Our friend, the jobber in question, simply has not looked far enough or in the right direction. "Tell him about us. We protect our jobbers. We don't sell their customers." And so it went.

One or two of the manufacturers had some very unpleasant things to say about the jobbers. They blamed direct consumer selling by the manufacturer on the jobber

himself. They were very blunt in stating that the average jobber wants to hog all the profit, beats the manufacturer's price down to the point where he in desperation skips the jobber and goes to the consumer in an attempt to secure some of the gravy which the jobber has been enjoying all these years.

And then we happened to stumble across the president of a well-known midwest soap firm, and told him our troubles. Crabby and cynical as always, he snorted in disgust when we suggested that there might be just one soap manufacturer hidden away somewhere out in the bushes who sold only and exclusively to jobbers. He dripped sarcasm all over the place in expressing his opinion of our childish belief. Such a firm does not exist, he insisted, and offered to back up his bold statement with large amounts of cash, much too large for consideration by one who normally buys two-dollar tickets to place. And there we left the subject, hanging in mid-air, wishing we had never started the argument.

IN TWO recent complaints against soap companies, the Federal Trade Commission claims misleading representations by the manufacturers. In one case, the Commission objects because a soap labeled as an olive oil soap does not contain one hundred per cent olive oil. In the other, the Commission states that a soap chip when it reaches the consumer does not contain a sufficient amount of petroleum derivative to warrant it being termed a "naptha soap." The basis of both of these complaints is more or less old stuff to the soap industry. Both controversies have arisen before and now they arise again.

In the case of a soap labeled "olive oil soap" and containing only five or ten per cent of olive oil or foots, there may be justification in the complaint of the F.T.C. But in the case of soaps carrying a third or a half olive oil, and in the case of the "naptha" soap, we feel that the Commission is splitting hairs,—is going out of its way to be technical, and is wasting both time and money over matters which are of no consequence from the angle of the public interest. Our reaction is that the Commission is giving attention to these minor cases which might well be turned elsewhere with much greater public benefits.

COMMERCIAL synthetic glycerine as a by-product of petroleum refining has been announced by the Shell Development Company, a subsidiary of the Shell Oil interests. An outside report to us from the Coast states that shipments of refined glycerine have been made and that commercial production is close at hand. Cost of production is said to be low, but how low, we do not know. On this factor, of course, hangs the future of the product. It is one thing to produce and sell glycerine when the market for soap-kettle crude hovers around fifteen or sixteen cents, and altogether another when the price is half of this.

If we were to form an opinion based on experience with glycerine manufacture from products other than natural fats and oils over the past thirty years, or with glycerine substitutes, we might still be skeptical from a purely commercial angle. But so great have been the strides in recent years in the chemistry of petroleum derivatives, and so simple is the chemical structure of glycerine, that we wonder again if after all this may not be the source of synthetic glycerine of which soapers have lived in fear for two decades. But for so many years has the soap kettle supplied the world with its glycerine, and rebuffed all threats of displacement, that it is difficult to picture the situation in any other way. Only time can answer the numerous questions in regard to the commercial practicability of the new product.

Ewing Galloway

# Which Soaps Sell?

**A discussion of the results of the 1939 home market survey by the "Milwaukee Journal" covering soaps, cleansers, shampoos, floor waxes, shaving soaps, and other household products.**

TOILET soap consumption showed a marked increase in 1938 over 1937 and previous years, according to the latest market survey made in the Milwaukee area by the *Milwaukee Journal*, well-known mid-west newspaper. For some years past, this newspaper has made an annual study of buying habits in the Greater Milwaukee market, particularly for soaps, scouring powders, cleansers, shaving soaps and creams, shampoos, dentifrices, and the like. This year, its house-to-house canvass revealed that the average Milwaukee family used 6.3 cakes of toilet soap per month as against 5.4 cakes for the previous year. If these figures are accurate, they represent an increase of some sixteen per cent and are rather striking. These soaps were made up of 81 brands of toilet soap, reported in use in that market in 1938, as compared with 73 brands reported in 1937. Of the total number of brands, nine accounted for 96 per cent of the consumption, while the remaining 74 brands accounted for only four per cent.

"Lux Toilet Soap" although having slightly fewer users during 1938, still commanded top position, being preferred by 29.6 per cent of all users as compared with 31.9 per cent during 1937 and 32.9 per cent during 1936. "Palmolive" moved from third place to second place, but was pressed closely by "Camay" and "Lifebuoy." It showed a slight increase over the previous year, but the 20.6 per cent in 1938 is below the 22.4 per cent who favored its use in 1937.

"Camay," in third place, being preferred by 19.3 per cent, increased from 18.1 per cent in 1938 and from 16.0 per cent in 1937. In those two years it was behind "Lifebuoy" in preference, but that brand has been decreasing in popularity in the Milwaukee market, dropping from second place in 1938 to fourth place. It is now used by only 18.4 per cent of the reporting families as

compared with 20.7 per cent in 1938 and 22.0 per cent in 1937.

"Ivory" remains in fifth position in popularity accounting for 13.1 per cent of the sales reported, as compared with 11.8 per cent in 1938 and 11.9 per cent in 1937. Probably the largest change of popularity in the toilet soap line was "Sweetheart" soap which this year marked an increase in use by more than 6,000 families over that of 1937 and increased popularity over 1936 amounting to almost 8,000 families. This brand, however, accounted for only 5.6 per cent of the total toilet soap used during 1938. Following the above in order were "Woodbury" with a figure of 3.7 per cent, "Colgate's Cashmere Bouquet" with 1.4 per cent and "Gimbel's Hard Water" with 1.1 per cent.

A small decrease in the consumer popularity of package soap flakes was noted, with a correspondingly slight gain in the popularity of granulated soaps. Seventy-six per cent of all families used soap flakes in 1938, as compared with 77 per cent in the two previous years, choosing from 55 brands as against 43 brands in 1937. The average consumption of soap flakes was 2.5 packages per month during 1938, compared to 2.6 packages per month during the preceding annual period.

Although continuing a previous decline in popularity "Hanser's" was still first with a consumer preference of 29.3 per cent in 1938 as compared to 30.1 per cent in 1937. Better than 8 out of every 10 independent grocers sell "Hanser" soap flakes in the market under survey. Second place goes to "Lux" flakes with a consumer use of 27.5 per cent, compared to 28.9 per cent last year. "Ivory" flakes continued a steady increase among buyers, moving from fourth to third place in the past year by virtue of an increase from 14.3 per cent of all buyers in 1937 to 18.4 per cent in 1938. In fourth place this year is "Chipso" which accounted for 16.1 per cent of purchases in this class. Last year, this brand was in third place.

During recent years, the gain in the use of granulated soap or soap beads has been steady. This year, however, marked a reduction in the increasing rate of popularity, as 74.7 per cent of all families used this product compared to 74.4 per cent in 1937. The average housewife reduced her purchases of this type of soap, reporting 3.7 packages per month this year while 3.9 packages per month were used during the previous year.

"Rinso," although showing a drop of almost 7.0 per cent in consumer popularity, still retains the number one ranking that it gained last year. It is now preferred by 49.6 per cent of users of this class of soaps. The popularity of the product is still greater than that exhibited in the years prior to 1937. "Oxydol," which dropped from first place two years ago, remains in second place, with a consumer use of 44.6 per cent as compared with 45.7 per cent last year and 53.0 per cent in 1937. "Ivory Snow" exhibited the largest gain in popularity moving from seventh place in 1938 to third place in 1939, converting more than 25,000 families to its use. Only 2.2 per cent preferred its use when reporting for 1937, but this year it was preferred by 19.9 per cent. "Super Suds" which had a customer preference of 16.4 last year and held third place, decreased in popularity this year to 13.0 per cent, dropping to fourth place. This decrease amounted to approximately 5,000 families. "Dreft," the non-soap fatty alcohol detergent, continued its increasing popularity and converted about 3,000 families to its use during the past year. Its customer preference is 8.0 per cent as compared with 6.1 per cent for the previous year.

Detergent crystals and water softeners continued their downward trend in popularity this past year. During 1938, only 27.6 per cent of all housewives reporting, bought these products. This is compared to 29.2 per cent during 1937 and 37.6 per cent in 1935. Even with this decrease, however, the number of brands being sold, increased from 71 in 1938 to 82 this year, probably due to the fact that many individuals are buying these products and reselling them, under their own label, from house to house. The average number of packages of detergents and water softeners being sold per month to families buying this type of product amounted to 1.6 as compared to 1.7 last year.

"Climalene" continues to dominate this class of cleansers with a consumer preference of 53.6 per cent, almost the same as reported in 1938. "No Name," although considerably behind "Climalene" in popularity is in second place, being preferred by 9.4 per cent of users, as compared to 10.1 per cent in 1937 and 9.8 per cent in 1936. "Melo" continues its steady climb and still holds third place with 6.5 per cent as against 5.6 per cent in 1937 and 4.3 per cent in 1936. Ten other brands appear in the listing with popularities ranging from 1.0 to 3.5 per cent.

The Milwaukee market for scouring powders, which had shown a steady downward trend for the past ten years, leveled off this past year. In 1929 these cleansers were used by 98.6 per cent of all families, but by 1937 the preference had dropped to 88.4 per cent. This year 88.5 per cent of families use this type of cleanser. Only those in cans with sifting tops are considered in this classification.

The standing of the leading brands showed little change this year. "Kitchen Klenzer" remained substantially ahead with a popularity amounting to 37.5 per cent this year as against 39.3 per cent last year and 42.0 per cent in 1936. This decrease amounted to approximately 7,000 families in two years. Second place was still held by "Old Dutch," which is preferred by 27.3 per cent of all buyers. This was below the 1937 figure of 28.2 per cent, but still above the 1936 report of 26.1 per cent. Nine per cent of the buyers of cleansers preferred "Gold Dust," which is only slightly below the popularity registered last year. "Sunbright," which shared popularity with "Bon Ami" in fifth place last year, moved up to fourth place with a con-

sumer preference of 7.5 per cent. Next in order came "Brite-Ize," "Bon Ami," "Lighthouse" and "Bab-O." Miscellaneous brands made up the remaining percentages of consumer preference.

### Bleaching Fluid Grows

THE use of bottled bleaching fluid has been steadily increasing during the past four years, attaining 60.5 per cent of all families in 1938 and 70.1 per cent for 1939. Data collected this year, for the first time, showed that the quart and gallon size bottles were the most popular. Average family consumption amounted to 1.3 bottles per month during the last 12-month period reported in January, 1939, as against 1.5 bottles during the previous 12-month period. Eighty-six brands were reported in use this year as compared to 52 for 1937, which indicates, of course, that many more fluids under private labels have come into the market. Several firms in Milwaukee supply bleaching fluid to individuals who put their own label on the bottle and sell it from house-to-house.

"Hilex," although decreasing in popularity since 1936, still retains a firm hold on first place in this market. As the favorite bleaching fluid, it is preferred by 39.3 per cent of all buyers this year, compared to 40.6 per cent in 1937, 44.5 per cent in 1936 and 50.5 per cent in 1935. "Wonderene," also showing a decrease in popularity, from a consumer preference of 14.8 per cent in 1937 to one of 11.7 per cent in 1938, retains its hold on second place. Third place is held by "Linco Wash," which shows a gain in the past two years, increasing from 2.4 per cent in 1936 to 9.2 per cent in 1937 and 10.4 per cent in 1938. Next in line comes "Mag" with a gain in popularity from 6.6 per cent in 1937 to one of 9.0 in 1938. Eleven other brands ranged in consumer preference from 1.0 per cent to 7.5 per cent.

Liquid window cleaners, this year, made their first appearance in the Greater Milwaukee Survey. Comparisons, then, cannot be made with previous years. Of the total number of families reporting in this survey, 27.6 per cent, or 53,151 families used liquid window cleaners. The use of 89 different brands was reported, with an average per family consumption of 3.5 cans or bottles during the past year.

At the head of the list of this type of cleaner was "Windex," having a consumer preference of almost three-quarters of all the brands used. This amounted to 73.2 per cent. Next in popularity was "Aero-Mist" which was preferred by 8.2 per cent. Following these two brands came six others ranging in preference from 1.1 to 1.8 per cent. Miscellaneous brands accounted for 10.3 per cent of the liquid window cleaner business, no brand having a consumer preference of more than 1.0 per cent.

### More Floor Wax Used

THE popularity of floor wax brands in the Milwaukee market is treated this year for the first time since 1931. During this eight year period, the number of floor wax purchasers has increased from 44,603 or 26.9 per cent of the Greater Milwaukee families to 120,167 or 62.4 per cent. Average purchases of floor wax during 1938 amounted to .94 cans or bottles per month for each family, as compared to .17 cans or bottles per month in 1931. The total number of brands in use has increased from 24 in 1931 to 91 in 1939.

Two types of Johnson's wax lead the parade of brands this year, accounting for a consumer preference of 80.8 per cent. Broken down, it amounts to a popularity of "Johnson's Wax" of 41.1 per cent and a popularity of "Johnson's Glo-Coat" of 39.7 per cent. Together these two brands account for 97,095 families out of the 120,167 users. "Old English" is in third place, preferred by 9.6 per cent of total consumers. Following in popularity are "Aerowax," "Fuller Brush Co.," and "Watkins," ranging from 1.4 to 2.6 per cent.

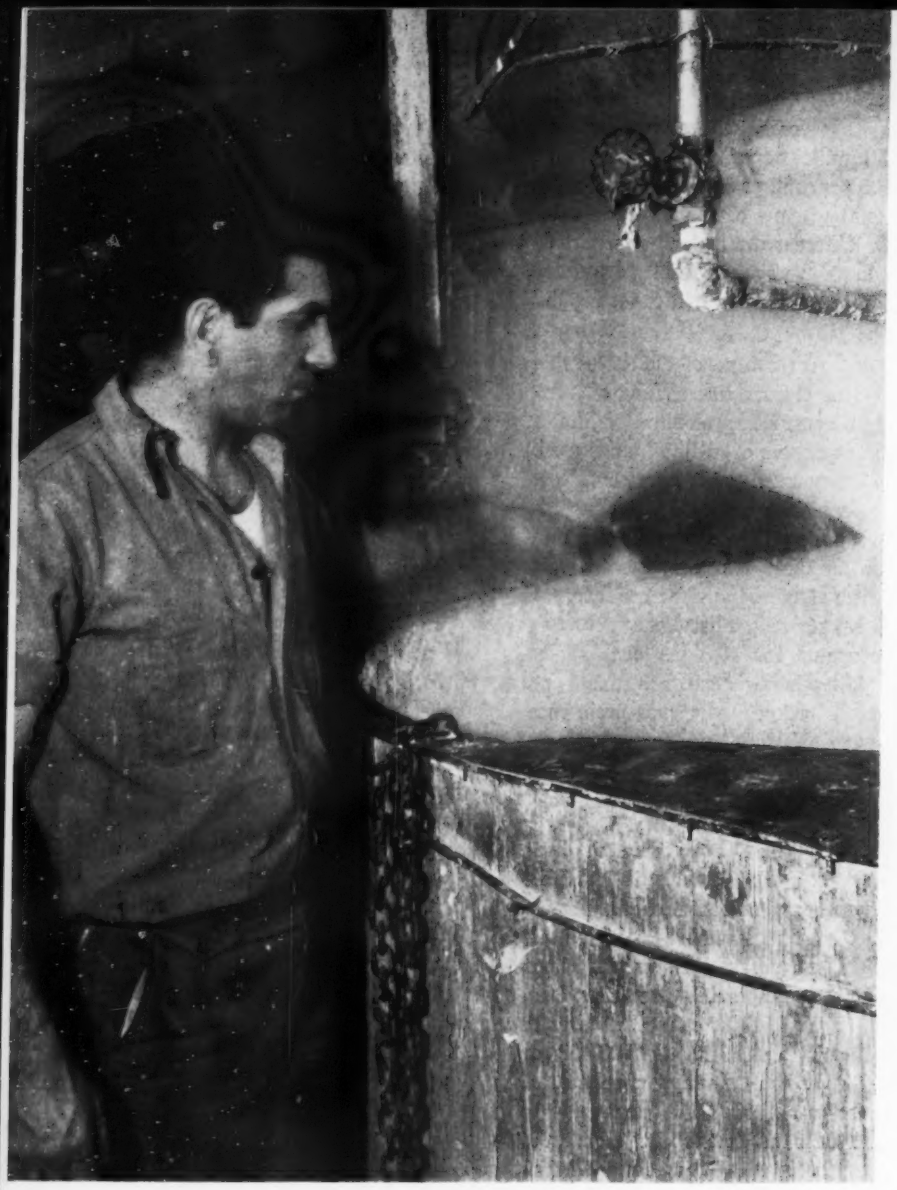
The use of regular shaving cream continued its downward trend this year, with 44.4 per cent of all men using this product as compared to 47.9 per cent last year. The decrease, no doubt, being due to the continued competition of brushless shaving cream and the increasing popularity of the electric razor. Only 72 brands were reported in use this year compared to 84 for 1937. The consumption of shaving cream in 1936 amounted to 6.0 jars or tubes per year for each user. In 1937 it increased to 6.4 tubes or jars and in 1938 it moved back to the 1936 rate of 6.0.

"Palmolive" shaving cream is the most popular, being preferred by 38.3 per cent of all users. In 1937 it had a popularity of 39.5 per cent. "Lifebuoy" still maintains second place with a consumer preference of 21.9 per cent. This is in contrast to 24.8 per cent in 1937 and 28.0 per cent in 1936. In third place comes "Williams" increasing its popularity from 8.7 per cent, as reported in 1938, to 12.3 per cent as reported in January of this year. Next in line is "Colgate," being preferred by 7.2 per cent of regular shaving cream users, and following this "Mennen" with a percentage of 5.6. Continuing down the list in order we have "Ingram's," "Peau Doux," "Watkins," "Listerine" and "Yardley."

The popularity of brushless shaving creams increased slightly during 1938, but did not reach the peak to which it had ascended during 1935. For in that year, 19.4 per cent of the shaving cream users preferred the brushless type. During 1936 and 1937, the preference decreased to 18.5 per cent, moving up to 18.9 per cent during the past year. All shaving creams which require no water or brush in application are considered under this heading. During 1938, the average consumption per year among users amounted to 6.2 tubes or jars per man, as compared to 6.1 tubes or jars per man during 1937.

"Barbasol" commanded the top ranking of shaving creams of this type for 1938, with a consumer preference of 20.0 per cent. This may be compared to its third place rank-

*(Turn to Page 117)*



# SOAP

AS WAS discussed previously, the texture of any soap varies widely with the character of the raw materials and the methods by which they are processed in the soap plant. Lathering power, hardness, solubility, stability and appearance are in turn dependent upon texture. Hard fats and soft fats, I.N.S. Factor, filling and building, and combinations and variations in composition have been considered in relation to manufacturing procedure as factors in the texture of the finished soaps. Further consideration will be given here chiefly to cold made, milled, and other forms of toilet soaps.

The appearance of soaps made by the cold process, depend to a great degree on the crutching operation. If crutching is continued until excessive thickening occurs, the soap will have a dull appearance. Cold process soaps are usually of a whiter color than boiled soaps produced from similar stock. The reason most generally accepted for this is that the more unsaturated fatty acids react first to form a granular soap in the presence of the excess alkali. The saturated fatty acids which are more difficult to saponify are then deposited as the temperature increases onto the nuclei thus created. Since the soaps of the more highly saturated acid are whiter in color than those of the unsaturated fatty acids, the opacity and whiteness of cold process soaps is generally superior to that of the boiled soaps, provided the proportion of saturated fatty acids present is not unduly low. This, in part, accounts for the popularity of the cold process in certain toilet soap manufacture.

The pure vegetable soaps are usually compounded of a stock which consists essentially of palm and coconut oils, with or without the presence of small quantities of other oils. Soaps of this type have a high solubility ratio and good texture both in use and during manufacturing operations. They are, however, somewhat poor in color, and are therefore often colored artificially for the sake of uniformity.

### Soap in the Kettle

THE texture of the soap in the pan itself requires careful control, since difficulties may arise in the manufacture if the soap at any stage becomes too hard or brittle, or on the other hand, too soft. Generally speaking, the more unsaturated oils present in the stock, the easier it is to saponify. This also applies to fats containing a fair proportion of free fatty acids, e.g. palm oil or bone grease. In this case the fatty acid combines with the alkali first and thus aids the saponification of the rest of the oil.

In palm kernel oil and coconut oil soaps, the saponification proceeds rapidly once it has been initiated. Care is required, as is well ksown, to prevent boiling over of the kettle due to the rapid swelling of the mass, and to avoid the formation

# TEXTURE

## . . . which raw materials and processes give what physical characteristics to soap?

*Part II*

**By Harold Silman**
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of lumps. Similar considerations apply in the manufacture of linseed-oil potash soaps, as these are also liable to swell and result in lumpy formations of soap during boiling. Tallow and the hard fats saponify slowly and it is recommended usually to have a quantity of soap from a previous boiling present in the kettle in order to help to initiate saponification. Every soap maker knows that in the kettle "soap makes soap." A fairly dilute lye is used to give a large reaction volume.

In the case of a mixed stock, the best procedure is probably to saponify the more easily saponifiable stock first, and then add the other fats a ta later stage. Naturally, however, if oils containing much glycerine are being used these should be added at an early stage. Where there is a proportion of nigre already in the pan, the harder fats may be added first since the soap and salt present will promote saponification and will avoid the difficulties which might be experienced with the early addition of the nut oils.

The composition of the stock for a toilet soap, plays an important part in the prevention of the initial onset of rancidity. Furthermore, incomplete saponification must be avoided, and thus, it has been recommended that a small proportion of free alkali in the toilet soap base is helpful. Another recommended procedure is to incorporate 2 to 3 per cent of rosin in the base. This, however, may cause the soap to become yellowish on storage. In the case of colored soaps, this is no disadvantage and the rosin certainly does help to produce a better keeping soap. It also aids as a perfume fixative. The rosin used should, for toilet soaps be of the lightest shade and should preferably be saponified separately and washed with brine before incorporation with the melt. Some manufacturers only partially saponify the rosin before adding it to the rest of the batch.

It is highly probable that when soaps become rancid, one or other of the oils used in their manufacture has previously shown signs of incipient rancidity. There is considerable weight of evidence to support this point of view. Since this is the case, it is to be expected that oils which may promote later rancidity in soaps would show the presence of minute quantities of aldehydes and ketones, detected by the well-known Kreis test. Those showing a positive reaction are best avoided for toilet soap manufacture.

As regards color and odor, it is naturally desirable that perfumed soaps should be prepared on a base as odorless as possible. Most of the harder fats produce practically odor-free soaps, but certain fats such as mutton tallow are unsatisfactory on account of their tendency to induce later rancidity in soaps containing them. Palm kernel oil imparts its odor very often to soaps containing it. This also applies to bleached bone oil, although better qualities of this type of oil have of recent years become available.

If the soap is not to be white or cream, a somewhat wider range of oils including the cheaper tallows or bleached palm oils become available. The tendency of rosin to darken, as has been stated, is not then such a pronounced disadvantage.

### Toilet Soaps

TOILET soaps should not be too hard in texture, and the stock used should be maintained so that the I.N.S. factor lies between 163 and 167. If the soap is too hard, milling will be difficult and a homogeneous soap will not be obtained. Moreover, the incorporation of perfume and color uniformly is not an easy matter. If the soap is brittle, small chips will break off, especially in the drying operation, and require much additional processing, which is often unsatisfactory in any event.

Cracking of the soap after it leaves the factory may be due to a variety of causes. It is important in the first place, to have the soap of the correct texture at the milling and plodding stages. This will depend to a degree on the temperature at which these operations are carried out. For this reason temperature control is important, also care should be taken to avoid introducing chippings or other soap into the mill at a substantially different temperature from the main

batch. Again, if there is any delay in bringing the chippings from the mill to the plodder, a nonuniform material so far as temperature is concerned will be fed to the latter, with the result that the soap will not be uniform, and will show a tendency to crack at a later stage. The pressure of the plodder requires careful adjustment. Excessive pressure increases the brittleness of the soap. Pressure variations should specially be guarded against.

As regards the drying operation, it is important that the flakes entering the dryer be as nearly uniform in size and thickness as possible. If this is not the case, uneven drying will result, the thinner and smaller particles being overdried. They may then contain possibly only half as much moisture as the general bulk of the chips. These overdried particles, when present in the finished soap, impart a rough texture to it, and may spoil its appearance.

### Opacity of Toilet Soaps

WHERE a direct-feed of the soap from the crutcher to the dryer is employed, without an intermediate setting and cutting, the soap tends to lose its opacity. Alhtough this process is economical, rapid, and universally used, it gives a reduction in opacity which is a disadvantage of the process, compared to the old method of framing, mechanical chipping, and then drying.

It is well known that rapid cooling of a soap results in the formation of a super cooled material in which the normal fibroid structure of the soap has not had ample opportunity to form. In the case of household laundry soaps, which on the Continent are often cooled in a cooling press, this increased translucency does not matter. Toilet soaps, however, are usually required to be opaque, and this opacity is lessened by the quick drying process. Titanium oxide or zinc oxide are of course added to restore normal opacity and also to whiten soaps which are off-color. However, zinc oxide or any pigment for that matter tends to dull the outside surface appearance of the soap.

There is still a small market for transparent soaps and it might not be out of place to consider the factors making for transparency in soap stocks. It has already been stated that rapid cooling prevents the formation of the fibroid structure normally present in soap. This is substantiated by the fact that if a transparent soap is remelted and allowed to cool very slowly it becomes opaque, while rapid cooling does not change its transparency.

For these reasons, if it is desired to promote transparency in soaps, the following criteria should be remembered.

(1) Rapid cooling of the finished soap is essential.

(2) A high viscosity of the soap stock is desirable to inhibit crystalloid formation. This can be achieved by the addition of colloids and substances such as petroleum jelly, glycerin, sugar, etc.

As regards raw materials, castor oil gives a soap of high transparency, which is, however, excessively soft. For this reason, tallow, coconut oil, etc. must be added. All materials used, must be of high quality, light in color, and contain no suspended matter. The latter is undesirable as it provides centers upon which local crystallization can commence.

The final texture of the soap is determined by the usual tests. If too much water is present, the addition of a small amount of soda ash will firm it although too much may cause opacity by providing centers for crystallization. Graining may be rectified by adding castor oil until the soap is closed.

### Soft Soaps

SOFT soaps when prepared should have a uniform, semi-transparent appearance, be light in color and should not be stringy. They should be firm to handle and have a good odor. Among the best bases for soft soaps is linseed oil since it produces a soap of a satisfactory texture and color if properly saponified, although its odor is sometimes disagreeable. Saponification usually is with caustic potash, although occasionally a small proportion of caustic soda may be added in cheaper quality soft soaps. Often about 1 per cent of pearl ash is added as this tends to produce a soap of brighter appearance.

Other oils, such as whale oil, and rosin are often incorporated. Fish oils are undesirable since they tend to produce a soap of bad odor. Rosin is a useful ingredient and is often present in fair proportion in soft soaps. It has the disadvantage, however, of making the soap rather stringy and tacky in nature and its presence is therefore an indication of inferior quality.

Saponification is carried out by the usual technique, taking care to keep the emulsion slightly alkaline to prevent lumping of the soap. Saponification is complete when a sample is clear, without the presence of free fat. In producing a soap of the correct texture, much depends on its water content. If the soap is too thin, the open steam must be left on the pan for a longer period, while if it is too short, further concentration should be carried out.

### Floating Soaps

THESE soaps are not quite as popular now as they were in the past, but since their manufacture is fundamentally a question of soap texture, a few remarks on the subject may not be amiss here. The chief process by which floating soaps are now prepared is the aeration process whereby the specific gravity of the soap, which is normally greater than unity, is reduced so that the soap will float on water. In this way the weight of the finished soap tablet can be reduced by about 10 per cent. The stock used should (1) contain a low percentage of water to lighten it as much as possible (2) be of good color and be on a base of edible tallow with about 25 per cent of coconut oil.

Floating soaps must be hard

(*Turn to Page* 70)

# Proposals for U. S. P. SOFT SOAP

FOLLOWING the publication several months ago of certain proposed revisions in the specifications for U. S. P. Soft Soap in *Soap & Sanitary Chemicals*. numerous comments and criticisms were received by Dr. E. Fullerton Cook. chairman of the revision committee. and by Prof. Edward D. Davy. referee in the Pharmacopoeial Committee of Revision for a revised soft soap formula. There was considerable divergence in the views submitted by soap manufacturers. and the committee has summarized some of these opinions in the following comments. Dr. Cook asks for further criticisms of the proposals as outlined and asks that other manufacturers who have not already communicated with him. submit their specific formulas and suggestions for a satisfactory soft soap. He is also desirous of receiving further comments on the following summary from those who have communicated with him previously. Communications should be addressed to Dr. E. Fullerton Cook. 43rd St. and Woodland Ave.. Philadelphia. Penna.

Comments on the revision of the U. S. P. Soft Soap formula were as follows: "The comments received from soap manufacturers were generally constructive but so widely divergent that one is forced to the conclusion that local supply of raw materials is more responsible for the selection of the oil base than the thought which the Committee of Revision has in mind. namely a soap free of objectionable odor and color with good detergent qualities and suitable for medicinal use.

It should be borne in mind that this soap is used in the Official Liniment of Soft Soap and medicinally in many other ways. It is not. therefore. expected that the U. S. P. soft soap be necessarily a cheap soap but one which can be made at reasonable cost with assurance that the supply of oil will be adequate.

In order to present the suggestions received as to the proper oils or alkali or mixture of alkalies it seems advisable to list them.

### U. S. P. Soft Soap Proposals

1. Cottonseed. corn or soya bean.

2. Olive oil (Sodium Hydroxide) sees no use for a soft soap.

3. No oil specified but limits rosin soap to not more than 5 per cent. All potash or in a ratio 60-40 $K_2O$. $Na_2O$.

4. Soya bean oil 80 per cent KOH 20 per cent NaOH.

5. Any vegetable oil. excluding castor and palm kernel oils.

6. Soya bean or corn oils.

7. Soya bean oil.

8. Refined Peanut oil 80 per cent. refined coconut oil 20 per cent with KOH.

9. Soya bean and corn oils or a mixture of them.

Another letter with recommendations as to what should constitute "Soft Soap" is recorded because the writer has shown a complete understanding of what the Committee of Revision is attempting to do in the selection of products of medicinal value.

Soft soap therefore must be thought of from the point of view of proper medicinal use as well as use as a detergent.

The oil and alkali must be of U. S. P. quality to produce desirable and uniform product. Commercial oils and alkalies do not produce desirable soaps for the purposes indicated.

Some of the soaps which are presented to the hospitals. made from Soya bean oil are highly objectionable because of odor and are dark in color. If odor could be standardized or defined we might conceivably set up requirements which would eliminate crude Soya bean oil and limit the U. S. P. soap to a bleached and well refined oil. The chemical and physical constants of the fatty acids as normally set up is not sufficient to differentiate crude Soya bean from refined oil. One might also bleach a crude oil and produce a soap of good color but upon ageing would result in one with a very objectionable odor. The bleaching agents might also be highly objectionable in a finished soap.

Soya bean is the only oil that has been consistently supported by the makers of soap in the comments referred to and for this reason has been given a great deal of attention. It is difficult to reconcile the various proposals that were made and likewise difficult to see how an acceptable soap can be made when only one of those recommending Soya bean oil proposes a refined and bleached oil. Some of the others specifically recommend raw filtered oil.

The glycerin content generally recommended is that resulting from the use of the glycerides of the fatty acids. Fatty acids as such are not recommended by the soap manufacturers."

FURTHER comments included the following: "Professor Edward D. Davy. referee in the Pharmacopoeial Committee of Revision for a revised Soft Soap formula has received a number of communications and comments from soap manufacturers in recent months. This response has come from the interest taken in the revision of the U. S. P.

(*Turn to Page* 117)

# SOAP SPECIFICATIONS...

## New proposed Federal specifications for chip, laundry, white floating and milled toilet soaps

NEW specifications covering chip soap, bar laundry soap, powdered laundry soap, white floating toilet soap, and milled toilet soap have been proposed by the Technical Committee on Detergents of the Federal Specifications Executive Committee, National Bureau of Standards. These new specifications which are merely under consideration at this time, are being submitted to manufacturers for their comments and suggestions. It has been requested by F. W. Smither, chairman of the detergent committee, that manufacturers study the proposals and send their comments, either approving or disapproving, along with reasons and suggestions to him care of the National Bureau of Standards, Washington, D. C. Complete copies of the proposed specifications may also be obtained by writing to him direct. Extracts of salient features of the specifications as proposed, follow:

### Laundry Bar Soap

**D. General Requirements**

D-1. *Soap; Bar, Laundry, Ordinary.*

D-1a. Ordinary laundry bar soap shall be a well-mde, uniformly mixed laundry or common soap, made from soda and fats, with no excessive proportion of rosin and a moderate amount of matter insoluble in alcohol, and shall be suitable for use with moderately hard water for general cleaning and laundry purposes.

D-1b. *Odor.* The odor shall not be objectionable in the soap as received or in a hot solution of the soap in water. The material shall not leave an objectionable odor on dishes or other objects after washing with a water solution of the soap and rinsing thoroughly with hot water. If desired, the odor of the material under the above conditions shall conform to the odor of a sample mutually agreed upon by buyer and seller. The mutually agreed upon sample shall be kept in an air-tight, closed container for comparison with samples from deliveries (See paragraphs F-1, I-2 and I-4).

D-1c. *Volatile Matter.* Moisture and matter volatile at 105° C shall not exceed 36 per cent. Deliveries which yield more than 36 per cent of volatile matter will be rejected without further test.

**E. Detail Requirements**

E-1. The material shall conform to the following detail requirements:

| | *Maximum Per Cent* | *Minimum Per Cent* |
|---|---|---|
| Moisture and matter volatile at 105° C | 36.0 | — |
| Sum of free alkali or free acid, total matter insoluble in alcohol, and sodium chloride | 10.0 | 2.0 |
| Free alkali, calculated as sodium hydroxide (NaOH) | 0.5 | |
| Free acid, calculated as oleic acid | 0.5 | |
| Matter insoluble in water | 1.0 | |
| Chloride, calculated as sodium chloride (NaCl) | 1.0 | |
| Rosin | 25.0 | |
| Anhydrous soap | — | 55.0 |

E-2. *Computation.* The percentage of moisture and volatile matter shall be computed, and reported by the testing laboratory, on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed moisture and volatile matter content of 34 per cent. For basis of purchase, see paragraph I-1.

**F. Methods of Sampling, Inspection, and Tests**

F-1. The inspector or purchasing officer shall determine whether or not the material is satisfactory as regards odor. If unsatisfactory the material should be rejected and not submitted to the testing laboratory for the tests referred to under Section F-2. (Se paragraphs D-1b, I-2 and I-4).

F-2. Deliveries will, in general, be sampled and tested according to the methods contained in Section F of Federal Specification P-S-536. However, the Government reserves the right to use any additional available information to ascertain whether the material ordered meets the specification.

**G. Packaging, Packing and Marking**

G-1. *Packaging.* Unless otherwise specified, commercial packages are acceptable under this specification.

G-2. *Packing.* Unless otherwise specified, the subject commodity shall be delivered in standard commercial containers, so constructed as to insure acceptance by common or other carriers, for safe transportation, at the lowest rate, to the point of delivery.

G-3. *Marking.* Unless otherwise specified, shipping containers shall be marked with the name of the material, and the quantity contained therein, as defined by the contract or order under which the shipment is made, the name of the contractor, and the number of the contract or order.

**H. Requirements Applicable to Individual Departments**

H-1. The following Departmental specifications of the issue in effect on date of invitation for bids shall form a part of this specification.

H-1a. *Army:* U. S. Army Specification No. 100-2, Standard Specification for Marking Shipments.

H-1b. *Navy:* Navy Department General Specifications for Inspection of Material (copies of which may be obtained without cost upon

application to the Bureau of Supplies and Accounts, Navy Department, Washington, D. C.)

H-1c. *Marine Corps*: Instructions issued by the Quartermaster.

H-2. *Navy Department purchases.*

H-2a. *Packaging.* Unless otherwise specified, commercial packaging is acceptable under this specification.

H-2b. *Packing.* Unless otherwise specified, the subject commodity shall be delivered in substantial wooden boxes of either nailed, wire-bound, or all-wire-bound construction, each containing not more than 100 cakes and conforming to the detailed requirements hereinafter indicated.

H-2b. (1) Boxes of nailed construction shall be made of a good grade seasoned lumber; ends shall be not less than ⅝″ thick; sides, tops, and bottoms not less than ⅜″ thick. Nails shall be not less than 5d cement coated. Boxes of nailed construction shall be strapped at each end by nailless strapping or galvanized round wire. Nailless flat strapping or galvanized round wire shall be applied uniformly, approximately one-sixth the length of the box from each end and drawn tight so as to compress the box and joined at the ends mechanically with a knot or tie having a joint efficiency of approximately 75 per cent of tensile strength of the strap or wire. Galvanized wire strapping shall be not less than 0.072″ in diameter and shall have a tensile strength of not less than 300 pounds. Nailless, cold rolled, flat steel strapping shall be not less than ½″ x 0.015″, having a tensile strength of not less than 425 pounds.

H-2b. (2) Boxes, wire-bound construction, or all wire-bound construction boxes of this type shall be made from new, sound, well seasoned thin board and cleat lumber and shall conform to the following detailed requirements:

Boards: tops, bottoms, sides and ends $\frac{3}{16}$″ thick; cleats $\frac{13}{16}$″ x $\frac{13}{16}$″ or ¾″ x $\frac{13}{16}$″. Wire 0.064″ diameter annealed steel, spaced not more than 6″ apart.

Staples: holding, binding, wire, shall be spaced not more than 2″ apart and not more than 1½″ from each end of each cleat. There shall be at least two staples in each end of each board.

Closures: boxes shall be closed by twisting together the two ends of the wire with two or more complete twists.

Ends, wire-bound construction: The ends of boxes which have an inside width in excess of 14″ shall be reinforced on the outside with one vertical batten in the center at least ¾″ x $\frac{13}{16}$″. Ends shall be fastened to the inside of the side cleats with either No. 16 gauge staples $\frac{13}{16}$″ long or with not less than 2d cement coated nails. Staples or nails shall be spaced not more than 2″ apart.

Ends, all wire-bound construction: Ends shall be reinforced with not less than two liners 1¼″ x $\frac{3}{16}$″ and binding wires 0.064″ in diameter stapled across the grain. Wires to be spaced not more than 6″ from liners or from each other.

If cakes of soap are not individually wrapped, boxes of wire-bound construction or all wire-bound construction shall be lined with a good grade of heavy paper before being packed.

H-2c. *Marking.* Unless otherwise specified, shipping containers shall be marked on one end with the name of the material, the quantity contained therein, as defined by the contract or order under which shipment is made, the name of the contractor, the number of the contract or order, and the gross weight.

## Powdered Laundry Soap

**D. General Requirements**

D-1. *Soap; Powdered.*

D-1a. Powdered soap shall be a soap in powdered form made from soda and fats, without rosin, as free as possible from water and all substances other than true soap, of a light uniform color, free from disagreeable odor, and suitable for laundering and other washing, cleaning and scouring processes with soft water, when the presence of alkaline salts is not desirable.

D-1b. *Volatile Matter.* Moisture and matter volatile at 105° C. shall not exceed 6 per cent. Deliveries which yield more than 6 per cent of volatile matter will be rejected without further test.

**E. Detail Requirements**

E-1. The material shall conform to the following detail requirements:

| | *Maximum Per Cent* | *Minimum Per Cent* |
|---|---|---|
| Moisture and matter volatile at 105° C | 6.0 | — |
| Sum of free alkali, total matter insoluble in alcohol, and sodium chloride | 4.0 | — |
| Free alkali, calculated as sodium hydroxide (NaOH) | 0.2 | — |
| Matter insoluble in water | 1.0 | — |
| Anhydrous soap | — | 91 |
| Titer of mixed fatty acids prepared from the soap | — | 39° C |
| Residue retained on a No. 12 sieve | 1.5 | — |
| Rosin | none | |

E-2. *Computation.* The percentage of moisture and volatile matter shall be computed, and reported by the testing laboratory, on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed moisture and volatile matter content of 4 per cent. For basis of purchase, see paragraph I-1.

**F. Methods of Sampling, Inspection, and Tests**

F-1. Deliveries will, in general, be sampled and tested according to the methods contained in Section F of Federal Specification P-S-536. However, the Government reserves the right to use any additional available information to ascertain whether the material ordered meets the specification.

**G. Packaging, Packing and Marking**

G-1. *Packaging.* Unless otherwise specified, commercial packages are acceptable under this specification.

G-2. *Packing.* Unless otherwise specified, the subject commodity shall be delivered in standard commercial containers, so constructed as to insure acceptance by common or other carriers, for safe transportation, at the lowest rate, to the point of delivery.

G-3. *Marking.* Unless otherwise specified, shipping containers shall be marked with the name of the material, and the quantity contained therein, as defined by the contract or order under which the shipment is made, the name of the contractor, and the number of the contract or order.

**H. Requirements Applicable to Individual Departments**

H-1. The following Departmental specifications of the issue in effect on date of invitation for bids shall form a part of this specification.

H-1a. *Army*: U. S. Army Specification No. 100-2, Standard Specification for Marking Shipments.

H-1b. *Navy*: Navy Department General Specifications for Inspection of Material (copies of which may be obtained without cost upon application to the Bureau of Supplies and Accounts, Navy Department, Washington, D. C.).

H-1c. *Marine Corps*: Instructions issued by the Quartermaster.

H-2. *Navy Department purchases.*

H-2a. *Packing.* Unless otherwise specified, the subject commodity shall be delivered in substantial wooden barrels, half barrels, or boxes. Barrels, half barrels, or boxes to be of the size commonly used and to be so constructed as to insure safe delivery by common or other carriers to the point of delivery at the lowest rate, and to withstand storage, further handling, and reshipping without being repacked.

H-2b. *Marking.* Unless otherwise specified, shipping containers shall be marked on one end with the name of the material, the quantity

contained therein (net weight), as defined by the contract or order under which shipment is made, the name of the contractor, the number of the contract or order, and the gross weight.

H-2c. Soap, powdered, when delivered, must be in strict accordance with the specifications. Failure to meet any of the requirements of the specifications shall be cause for rejection.

## Milled Toilet Soap

**D. General Requirements**

D-1. *Soap; Toilet, Milled.*

D-1a. Milled toilet soap shall be a high grade, milled cake soap, as free as possible from water, either colored or uncolored, and mildly perfumed unless otherwise specified, thoroughly saponified, well compressed in firm, smooth cakes of a size and shape specified in the contract. It should lather freely when used with cold, soft water.

D-1b. *Volatile Matter.* Moisture and matter volatile at 105° C. shall not exceed 15 per cent. Deliveries which yield more than 15 per cent of moisture and volatile matter will be rejected without further test.

**E. Detail Requirements**

E-1. The material shall conform to the following detail requirements:

| | *Maximum Per Cent* | *Minimum Per Cent* |
|---|---|---|
| Moisture and matter volatile at 105° C | 15.0 | |
| Sum of free alkali, total matter insoluble in alcohol, and sodium chloride | 1.7 | |
| Free alkali, calculated as sodium hydroxide (NaOH) | 0.1 | |
| Matter insoluble in water | 0.4 | |
| Unsaponified saponifiable matter | 0.3 | |
| Anhydrous soap | | 86.0 |
| Rosin, sugar, and foreign matter | none | |

E-2. *Computation.* The percentage of moisture and volatile matter shall be computed, and reported by the testing laboratory, on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed moisture and volatile matter content of 12 per cent. For basis of purchase, see paragraph I-1.

**F. Methods of Sampling, Inspection, and Tests**

F-1. Deliveries will, in general, be sampled and tested according to the methods contained in Section F of Federal Specification P-S-536. However, the Government reserves the right to use any additional available information to ascertain whether the material ordered meets the specification.

**G. Packaging, Packing and Marking**

G-1. *Packaging.* Unless otherwise specified, commercial packages are acceptable under this specification.

G-2. *Packing.* Unless otherwise specified, the subject commodity shall be delivered in standard commercial containers, so constructed as to insure acceptance by common or other carriers, for safe transportation, at the lowest rate, to the point of delivery.

G-3. *Marking.* Unless otherwise specified, shipping containers shall be marked with the name of the material, and the quantity contained therein, as defined by the contract or order under which the shipment is made, the name of the contractor, and the number of the contract or order.

**H. Requirements Applicable to Individual Departments**

H-1. The following Departmental specifications of the issue in effect on date of invitation for bids shall form a part of this specification.

H-1a. *Army*: U. S. Army Specification No. 100-2, Standard Specification for Marking Shipments.

H-1b. *Navy*: Navy Department General Specifications for Inspection of Material (copies of which may be obtained without cost upon application to the Bureau of Supplies and Accounts, Navy Department, Washington, D. C.).

H-1c. *Marine Corps*: Instructions issued by the Quartermaster:

## Chip Soap

**D. General Requirements**

D-1. *Soap; Chip.*

D-1a. Chip soap shall be a soap in chip form made from soda and fats, without rosin, as free as possible from water and all substances other than true soap, of a light uniform color, free from disagreeable odor, and suitable for laundering and other washing, cleaning and scouring processes with soft water, when the presence of alkaline salts is not desirable.

D-1b. *Volatile Matter.* Moisture and matter volatile at 105° C. shall not exceed 10 per cent. Deliveries which yield more than 10 per cent of volatile matter will be rejected without further test.

**E. Detail Requirements**

E-1. The material shall conform to the following detail requirements:

| | *Maximum Per Cent* | *Minimum Per Cent* |
|---|---|---|
| Moisture and matter volatile at 105° C. | 10.0 | |
| Sum of free alkali, total matter insoluble in alcohol, and sodium chloride | 4.0 | |
| Free alkali, calculated as sodium hydroxide (NaOH) | 0.2 | |
| Matter insoluble in water | 1.0 | |
| Anhydrous soap | | 87.0 |
| Titer of the mixed fatty acids prepared from the soap | | 39°C |
| Rosin | none | |

E-2. *Computation.* The percentage of volatile matter shall be computed, and reported by the testing laboratory, on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed moisture and volatile matter content of 8 per cent. For basis of purchase, see paragraph I-1.

**F. Methods of Sampling, Inspection, and Tests**

F-1. Deliveries will, in general, be sampled and tested according to the methods contained in Section F of Federal Specification P-S-536. However, the Government reserves the right to use any additional available information to ascertain whether the material ordered meets the specification.

**G. Packaging, Packing and Marking**

G-1. *Packaging.* Unless otherwise specified, commercial packages are acceptable under this specification.

G-2. *Packing.* Unless otherwise specified, the subject commodity shall be delivered in standard commercial containers, so constructed as to insure acceptance by common or other carriers, for safe transportation, at the lowest rate, to the point of delivery.

G-3. *Marking.* Unless otherwise specified, shipping containers shall be marked with the name of the material, and the quantity contained therein, as defined by the contract or order under which the shipment is made, the name of the contractor, and the number of the contract or order.

## White Floating Toilet Soap

**D. General Requirements**

D-1. *Soap; Toilet, Floating, White.*

D-1a. White, floating soap shall be a cake soap of good light color, without objectionable odor, thoroughly saponified, and so prepared as to float on water.

D-1b. *Volatile Matter.* Moisture and matter volatile at 105° C. shall not exceed 34 per cent. Deliveries which yield more than 34 per cent of volatile matter will be rejected without further test.

(*Turn to Page 70*)

# Unloading Liquid Caustic

IN THE case of hazardous operations in industry, as in other things, familiarity frequently breeds contempt,—and carelessness. The dire consequences of carelessness in handling corrosive chemicals are well known, but nevertheless sometimes ignored. This applies especially in the unloading and handling of liquid caustic soda and potash in the soap plant. Nobody should be permitted to play any part in the handling of these strong alkali solutions except employes who are definitely reliable, who have been properly instructed, and who are adequately supervised. With this in mind, the Manufacturing Chemists' Association has recently adopted a set of rules which it recommends as standard practice in unloading liquid caustic, and has issued them in the form of a copyrighted manual. Among other things, the manual gives the following advice which is well worth heeding:

### Clothing

Caustic in contact with skin may result in serious injury before operator is aware of it, as there is no immediate warning of its presence by stinging. Rubber-covered canvas gloves (shirt sleeve to be rolled down over glove wristlet), and close-fitting goggles should therefore be worn throughout unloading operation. Utmost care should be taken to protect the eyes against spattering. Use of hat, cotton overalls, rubber aprons, and rubber booties are recommended (tops of booties to go inside trousers). Shirt should be buttoned up to the neck.

### Water In Ample Quantity

Must be immediately available at the unloading rack. A shower bath provided with treadle valve is recommended. Should caustic contact the skin, immediately wash off with a large amount of water. Caustic burns should receive water treatment and medical care immediately. Eye injuries should be thoroughly treated with running water and a physician called immediately.

Contents of car tank should be discharged only in the daytime, or when adequate lighting is provided. If it is necessary to move tank car after part of caustic content has been unloaded, replace all closures securely. Unloader must not leave car during the unloading operation. Make sure that tank storage will hold contents of car and that the storage is vented before connecting the unloading line.

### Cold Weather Handling—Steaming

Standard 50 per cent liquid caustic soda solidifies at a temperature of approximately 55° F. or below, while the 70 per cent grade crystallizes at about 149° F. Shipments of liquid caustic potash do not differ markedly from liquid caustic soda, and the same directions will therefore apply to both products. To determine whether steaming is necessary, open the dome cover after internal car pressure has been released and insert a rubber-capped, long iron rod down through liquor to the car bottom and along the sides. The "feel" of contact will indicate the presence of crystals and necessity of steaming. Should a layer of solid caustic be formed over the top of the contents within the dome, this crust should be punctured before admitting steam to the heating coil so as to permit liquid expansion as heating progresses. It is advisable during cold weather, especially when there is a high velocity wind, to cover the tank car (if uninsulated) with tarpaulin or other protecting medium, as the loss of heat under such conditions may seriously prolong the melting time.

### Sampling

It is essential that contents of car be completely liquid before sample is taken. Because of the difficulty encountered in obtaining a sample of liquor as it was when shipped, many consignees prefer to accept the shipper's sample rather than take one of their own. *Wear goggles and rubber-covered canvas gloves during this work.*

### Unloading Cars

Tank cars containing caustic may be unloaded through the dome by means of an eduction pipe extending to the bottom of the tank or through bottom discharge outlet. Where car is equipped with eduction pipe, dome unloading may be accomplished by means of air pressure. For bottom unloading, the liquor may flow by gravity to a pump, or directly to the storage tank with or without the aid of air pressure. *Before starting unloading operations, see that pressure within car has been released, that caustic is completely liquid, and that delivery lines are thoroughly heated.* Preheating of lines in cold weather will prevent clogging and may be accomplished by blowing steam into lines. Jacketed lines are advisable. Bottom discharge outlet should be thoroughly heated with steam if bottom unloading is contemplated. (Detailed steps covering various methods of unloading are given in the manual. —Ed.)

### Preparation of Empty Car for Return

Unloading Line. After blowing out line with steam, followed by air, close bottom outlet valve, then disconnect and securely replace bottom outlet plug or cap. Care must be exercised during this operation to avoid caustic spattering, and goggles and rubber-covered canvas gloves must be worn.

Heating Coil. Disconnect steam lines and blow coil out with compressed air. Do not replace caps on inlet and outlet connections: let caps hang by their chains. If car is equipped with valves at these points, leave valves open.

After removing connections, replace closures on all other tank openings. Close and securely fasten dome cover.

The four 10¾" x 10¾" I.C.C. caution placards on sides and ends of the tank or car must be removed, or reversed (if in metal placard holders). The empty tank car must be offered to the receiving carrier either without placards, or preferably with four (4) "Dangerous-Empty" placards, in conformity with Interstate Commerce Commission Regulations.

### Materials and Equipment

Piping. Use wrought iron, steel, or cast iron pipe. No copper, brass, bronze, or aluminum should be allowed to come in contact with liquid caustic. Caustic solutions at ordinary temperatures have little effect upon iron. At elevated temperatures the iron pick-up, although small, becomes more appreciable. Certain alloys are resistant to such action. Consult shipper for data.

Joints. Flange joints throughout the piping installation are preferable to screwed connections. Couplings do not hold up well in caustic service. It is advisable that as few

(*Turn to Page* 70)

# *New Products and*

The long narrow design and pebbled surface provide handy slip-proof containers for "Kleenway" shoe dressing and spot cleaner, products of Kleenway Co., St. Louis. Containers by Armstrong.

National Carbon Co., New York, has just introduced a new insect repellent under the name "Sta-Way". It is described as stainless, non-greasy and long lasting. Bottle by Owens.

Vitalex Process Co., Philadelphia, has recently shifted to a metal container for its "Mel-O-Wax" leather reconditioner. They report increased retail acceptance. Containers designed and made by Continental.

# Packages

A new soapless cleanser has just been introduced in the middle west by Linco Products Corp., Chicago. It is sold under the trade name "Juno." Two sizes are illustrated.

Cellophane containers have been adopted by Barrett Co., New York, for packing "Polar" moth balls and flakes. This packing found to be more effective in imprisoning the naphthalene odor, they say.

A sturdy, laminated boxboard is used by Robert Gair Co. in construction of this "Baby Bath Kit" for Vanta Laboratories, Newton, Mass. Hinged cover and baby blue and pink color design are features.

# RAW MATERIALS

## *for the soap and allied industries*

RED OIL

STEARIC ACID

CAUSTIC SODA

CAUSTIC POTASH

iEi

ALCOHOL
AMMONIA
BLEACHING POWDER
BORAX
BICARBONATE OF SODA
CARBON TETRACHLORIDE
CALCIUM CHLORIDE
CAUSTIC SODA
CAUSTIC POTASH
DYES
DISODIUM PHOSPHATE
GLAUBERS SALTS
GLYCERINE
METASILICATE
OXALIC ACID
POTASSIUM CARBONATE
SAL AMMONIAC
SALT
SAL SODA
SILICATE OF SODA
SODA ASH
TRISODIUM PHOSPHATE

TALLOW

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**PALMITIC ACID**
90-95% Pure White
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Inquiries solicited on this low price glycerine replacement.

Every raw material necessary for the manufacture of soap and allied products is carried in stock and is available at the right price for immediate delivery to your door.

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PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPESEED OIL
ROSIN
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# News....

### Form No-Name Products, Inc.

Ozene Laboratories have recently purchased the assets and good will of the Laufer Products Co. and are operating under the new firm name of No-Name Products Inc., at 534 West Cherry Street, Milwaukee. The new organization will manufacture household ammonia and window cleaner under the No-Name trade mark, in addition to starch tablets and cleaning compound previously sold.

♦

### Canadian Soap Analysis

"Sampling and Analysis of Soap" is the title of an article which appeared in the March issue of *Canadian Chemistry and Process Industries*. The methods have been approved by the Canadian Government Purchasing Committee and are an abstract of that committee's specification No. 2-GP-11-1938.

♦

### T.G.A. to Meet May 22-24

L. R. Root, Scoville Mfg. Co., vice-chairman of the entertainment committee for the annual meeting of the Toilet Goods Association, has just announced the completion of plans for the coming session. Following registration the morning of Monday, May 22, there will be a group luncheon and a business session in the afternoon. That evening the group will see "Stars In Your Eyes," a new musical show featuring Jimmie Durante and Ethel Merman. A supper dance at the Hotel Biltmore, convention headquarters, will follow the theatre party.

On the second day of the meeting, May 23, the morning will be taken up with a business meeting and the afternoon will feature a golf tournament at the Winged Foot Country Club for the men and a bridge tournament at the Biltmore for the ladies. Lunch will be served at the Country Club for the golf players. The evening has been left free. The entertainment feature of the final convention day will be the

Herman L. Brooks

annual banquet and dance the evening of May 24.

The business sessions will be given over largely to open floor discussions of various pressing industry problems which include the various food and drug acts, federal and state, the many state measures dealing with labeling and registration of products, and the excise tax on cosmetic sales.

♦

### Cuticura Soap Stipulation

Potter Drug and Chemical Corp., Malden, Mass., under a supplementary stipulation with the Federal Trade Commission, has agreed to discontinue false and misleading advertising of its product "Cuticura" soap. The company had made claims that the soap would help promote lustrous hair growth, aid in correcting dry skin, refine skin texture, impart new firmness to the skin, and would eliminate coarse pores. The stipulation is supplemental to one accepted by the commission in August, 1935.

### P & G To Redeem Stock

Procter & Gamble Co., Cincinnati, will redeem on June 15, 1939, fifty per cent of all the issued and outstanding shares of its preferred stock of the series of February 1, 1929, pro rata from all the holders. These holders are required to surrender such certificates at any time on or after June 1, 1939, at the offices of the company in the Gwynne Building, Cincinnati, or at the offices of the Bankers Trust Co., 16 Wall St., New York, so that certificates to be redeemed may be separated from the shares not called for redemption and payment made for the shares redeemed.

♦

### Glycerine from Gasoline

Dr. W. J. Hund, assistant director of the laboratory of Shell Development Co., Emeryville, Calif., recently announced the discovery that glycerine can be derived from the refining of gasoline. It is said that six company scientists worked four years before completing the process.

♦

### DeLaire Visits U. S.

Francois deLaire, administrateur delegue of Fabriques deLaire, Issy, Paris, recently arrived in New York, where he is making his headquarters at Dodge & Olcott Co. His visit, among other things, is connected with his part in the exhibit of the perfume raw materials group who will have an important place in the French section of the World's Fair.

♦

### Edwin Percy Gamble Dies

Edwin Percy Gamble, son of James Gamble who founded Procter & Gamble Co., died at his home in Palo Alto, Calif., April 23. He was 86 years of age and co-founder of the Elizabeth Gamble Hospital in Cincinnati.

### Cites "Fels Naptha"

The Federal Trade Commission has issued a complaint against Fels & Co., Philadelphia, charging misrepresentations in the company's advertising literature and on containers of its product "Fels Naptha Soap Chips." The commission states that it is not true that the product in question contains a sufficient amount of naphtha to enhance its value and increase its cleansing power, as the advertising claims, nor does it contain a sufficient amount of naphtha or any other petroleum distillate to warrant its being labeled as a naphtha product.

### Banker Joins Lever Board

Dr. J. W. Beyen, formerly president of the Bank for International Settlements, is a new member of the boards of Lever Bros., Unilever N. V., and Lever Bros. & Unilever, London. Dr. Beyen, who is 42 years of age, occupied a post in the Dutch Department of Finance until 1925, when he was appointed secretary of the Philips Incandescent Lamp Works. Since then he has been connected with the Javasche Bank and the Rotterdamsche Bankvereeniging.

### U. S. Soap Exports Down

Preliminary statistics indicate that soaps entering into foreign trade channels from the United States in 1938 were valued at $2,797,000, a considerable decrease from the $3,200,500 value in 1937. Heading the exports from United States were toilet soaps, valued at $1,385,000. Among other items were laundry soaps, $471,000; medicated soaps, $187,000; shaving creams, $153,000 and powdered or flaked soap, $125,000.

### P & G Laundry Campaign

Procter & Gamble Co., Cincinnati, is planning an advertising campaign which will present the laundry industry to the public. Although the copy will not appear as sponsored by P & G, the cost will be borne entirely by them. Full pages in black and white in two of the national weeklies will be the media employed. In addition, the company will offer various merchandising and sales-aid devices to a number of laundries at no cost.

### Hold Laundry Trade Meeting

The annual convention of the Laundry & Cleaners Allied Trades Association was held at White Sulphur Springs, W. Va., April 27-28. Business sessions were confined to the mornings, with the afternoons open for golf, riding, swimming, etc. The annual banquet was held on the evening of the 28th.

### F. T. C. Cites Wrisley

The Federal Trade Commission has ordered Allen B. Wrisley Co., Allen B. Wrisley Distributing Co., and Karl Mayer & Co., all of Chicago, to cease using the word "olive" to describe or in any way refer to soap, the oil or fatty content of which is not wholly olive oil, unless in conjunction, each constituent oil is referred to in the order of its predominance by volume, beginning with the largest single oil constituent. The commission found that several of the brands of soap sold by the above companies as "olive oil" soaps contain 5 to 15 per cent of olive oil or olive oil foots.

### U. S. Bonds as Camay Prize

Procter & Gamble Co., Cincinnati, is nearing the end of a six weeks contest, in which two $1,000 U. S. Government Savings Bonds and fifty $100 bonds have been awarded each week. Contestants were required to answer the question "What do you like best about Camay?" and send the company three Camay wrappers.

### Derby Speaks Before AATCC

Roland E. Derby, chief chemist, M. T. Stevens & Sons Co., spoke before the American Association of Textile Chemists and Colorists at a meeting at the Chemists' Club, New York, April 21. His topic, "The Application of Dry Cleaning to Mill Processes" was followed by an informal discussion.

### Wants Soap Agency

A firm in Baghdad, Iraq, would like to establish an agency for the sale of American made soaps. Interested parties may secure further information by making application to the U. S. Bureau of Foreign and Domestic Commerce referring to File No. 1130.

### Domestic Soaps For Peru

Peru, with its sixty-two soap factories, satisfied from 85 to 90 per cent of the country's domestic requirements in 1938, according to reports issued by the American Commercial Attache at Lima. The annual output of these plants amounts to approximately 15,000 metric tons, most of which are laundry soaps. Imports of soaps during the first ten months of 1938 amounted to 168 metric tons as compared to 160 tons in the corresponding period of 1937.

### T. K. Stewart Dies

Thomas K. Stewart, treasurer of Garrigues, Stewart & Davies, Inc., glycerine brokers, New York, died recently after suffering a stroke at his home in East Orange, N. J. He was born in Scotland and was sixty-one years of age.

### Branigan Visits Abroad

George V. Branigan, technical director, Ungerer & Co., and Mrs. Branigan recently sailed on the *S. S. Washington* for a month's visit abroad. Mr. Branigan will deliver a series of lectures in England and Germany on such subjects as "American Essential Oils" and "Major Errors in Evaluating Essential Oils and Aromatics by the Nose."

### Guatemala Soap Imports

Imports of all types of soaps into Guatemala in 1938 amounted to only approximately 49,000 pounds. Of this amount, over half was supplied by the United States, with Germany supplying 10 per cent. These imports amounted to only 15 per cent of the country's requirements, the remaining 85 per cent being supplied largely by two domestic plants.

### Hair Tonic Stipulation

Gray Drug Store, 1658 Broadway, New York, has recently entered into a stipulation with the U. S. Federal Trade Commission, that it will desist from advertising that use of "Mul-Leves" for the hair will stimulate new hair growth or stop falling hair, and that use of their shampoo will assure a healthy scalp free from dandruff.

### C-Z Chemical To Advertise

C-Z Chemical Co., Beloit, Wis., is conducting a new advertising campaign for its "C-Z cleaner," a hard water softener, using newspapers, magazines and radio.

### Oil Trades Re-Elect

The Oil Trades Association of New York re-elected its entire slate of officers for the current year at its recent annual meeting held at the Waldorf-Astoria Hotel, New York. They are: Joseph C. Smith, Smith-Weihman Co., president; William H. Correa, Socony-Vacuum Oil Co., vice-president; Albert J. Squier, Squier-Sanderson Co., secretary; Rudolph G. Sonneborn, L. Sonneborn Sons, Inc., treasurer. These officers together with the following compose the board of directors. Charles V. Bacon; John W. Baker, Philippine Refining Corp. of N. Y.; J. H. Blakney, Colgate-Palmolive-Peet Co.; E. L. Cleaves, James B. Berry Sons Co.; Dart E. Hoffman, Tide Water Oil Co.; W. M. Osborn, Zimmerman Alderson Carr Co.; John F. Renick, Renick & Mahoney, Inc.; H. Mart Smith, Arrow Oil Co.; and Edward A. Theurkauf, F. Marsily & Co.

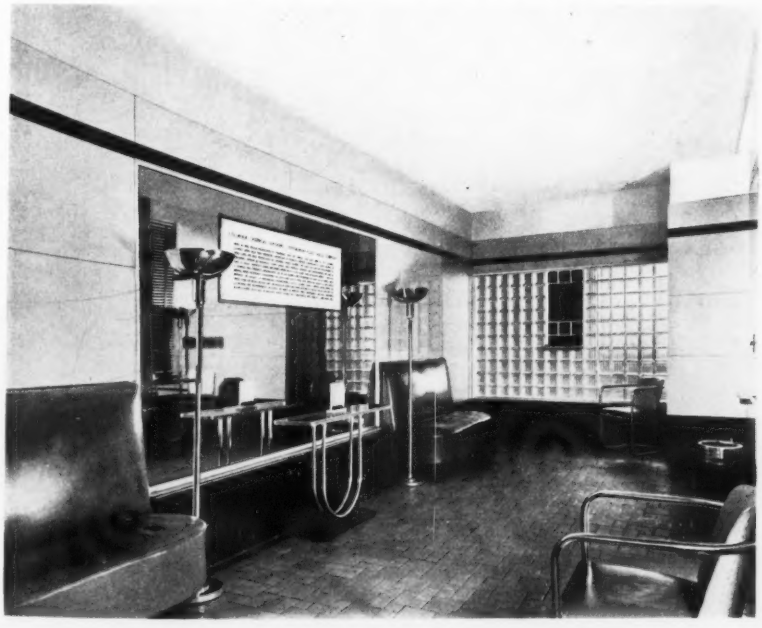
### Industrial Chem. Moves Branch

The Industrial Chemical Sales Division of the West Virginia Pulp & Paper Co. recently moved the offices of their Chicago Branch to newer and larger quarters at 35 East Wacker Drive. John P. Harris is manager of the Chicago office.

### Columbia Equips New Offices

Columbia Alkali Corp., sales unit of Columbia Chemical Division of Pittsburgh Plate Glass Co., has made use of Pittsburgh products in the construction and decoration of the reception room in its recently completed office building at the Barberton plant. The walls are covered with gray carrara glass, trimmed in maroon carrara glass. The floor is of tile, harmonizing with the rest of the modern design. Furniture is of red leather with chrome trimming.

*Reception Room in Offices of Columbia Alkali Corp. at Barberton, Ohio*



### Turner, Pfister Merge

Turner Chemical Co. and Pfister Chemical Works, both of Ridgefield, N. J., have consolidated to form the Turner-Pfister Chemical Corp. The new corporation will manufacture chemicals and textile specialties which were formerly made by the Pfister Co., as well as "Toxol," a mothproofing product formerly manufactured by the Turner organization. The officers of the corporation are: Walter D. Merrill, president; Dr. Alfred Pfister, vice-president and production manager; Lawrence W. Roberts, treasurer, and Philip J. LoBue, secretary. Joseph Turner & Co., manufacturers' agents for a complete line of industrial chemicals, will distribute the products of the merged companies. Mr. Merrill is also head of this company.

### Dreyer Locates Calif. Office

The new California branch office of P. R. Dreyer Inc., essential oils, New York, is located at 2309 E. 8th Street, Los Angeles. E. R. Trippe, Jr., manager of the branch, has established an office with the Industrial Chemical Supply Co., where the Dreyer company will maintain complete stocks.

### Soap Exports to Hawaii

Laundry soaps, valued at $245,000, were the largest item in the soap field to be shipped to Hawaii from the United States in 1938, according to the U. S. Department of Commerce. Exports of toilet soaps to that territory were valued at $203,000, with shipments of powdered and flaked soaps valued at $119,000. In the toiletry field, shipments of dentifrices were valued at $96,000; face creams at $108,000; rouges and lipsticks, $45,000; and hair preparations, $112,000.

### First Machinery Moves

First Machinery Corp., New York, has moved to newer and larger quarters at 9th Street and East River Drive. The new location will consolidate the company's warehouse, plant and office under one roof.

*They*

# ALL LOOK ALIKE ON PAPER;

***but*** . . . real merit is PROVEN by the way consumers order and reorder.

By handling Clifton products exclusively wide-awake jobbers consistently increase their sales and profits. You can do likewise.

Details for the asking on the complete line of soap bases, dispensers, deodorant cakes, disinfectants, waxes, polishes and kindred products. Inquire today from Clifton Chemical Co., 246 Front St., New York.

# CLIFTON

# Appeals Court Reverses Spray Soap Decision

THE decision handed down just a year ago in the patent infringement action brought by Bertram W. Coltman, Chicago attorney, against Colgate - Palmolive-Peet Co. has just been reversed by Judge Evans of the U. S. Circuit Court of Appeals for the Seventh Circuit in a decision handed down April 15. The principal point of controversy, said Judge Evans in his decision, turned on whether the original Coltman patent application filed August 15, 1921, was sufficiently broad to sustain later claims made in a divisional application filed December 20, 1927.

It was argued by the Colgate attorneys that a product made in accordance with Coltman's original patent would be a flake of a spongy character. Not until the divisional patent application was there any mention of soap beads such as "Supersuds" and "Palmolive Beads" which were said by Coltman to infringe his patent. And prior to the application for the Coltman divisional patent, the C-P-P attorneys pointed out, the Lamont patent which they control had been issued, antedating by a year the claims advanced in the Coltman divisional patent.

The court gave much weight to this point, stating in its decision that while "the lapse of some seven years between the filing of the original application and the filing of a divisional application is not itself a bar to the successful prosecution of a divisional application, such delay, however, does not inspire confidence in the later application, when it appears that in the meantime others working in the art have developed a product and disclosed a process for making the article which are somewhat like the product described in the specifications and claims of the divisional patent."

"There is still another very significant difference between the original and the later patent," said the court, "which prevents the enlargement of the discovery of the original application so as to become a basis for the claims of the divisional patent. When plaintiff described his process and the method he followed to secure his flakes, he said he used *warm* air for the purpose of *drying*. The product described in the divisional claims needs *hot* air, and the word 'hot' as used in this art means a temperature ranging from 300 to 500 degrees Fahrenheit. Warm air may dry, but it was a hot air that produced the puffing of the particles and the voids, as well as the *single* particles of soap. These are essential qualities of defendant's infringing soap.

"It is true that in *one* instance plaintiff used the word 'hot' in the specification, but it was not used other than as equivalent to warm, in its purpose, namely, that of drying.

"The other qualities which result from the injecting of highly heated air into the liquid soap were not only absent from the description in the specification, but their absence strongly negatives the existence of what is the heart of the claims of the divisional patent.

"Both hot and warm air are effectively used in drying liquids. But hot air applied to the same liquid may produce peculiar results in shape, in form, in hollow particles, etc., which warm air will not accomplish. One who described as a step in his process the use of warm air for drying purposes could not have appreciated the use of hot air for very important purposes other than drying."

◆

### Chemical Salesmen to Meet

The Salesmen's Association of the American Chemical Industry will hold a luncheon meeting May 10th at the Chemists' Club, New York. The association is arranging for a series of speakers to address their luncheon gatherings on the subject "Chemicals and The Purposes for Which They Are Used In Key Industries." The May 10th meeting will be addressed by Dr. Edward M. Frankel, consultant for the West Virginia Pulp and Paper Co., who will speak on "Chemicals and Their Uses In The Paper and Pulp Industry."

◆

### Owens Guests Preview Fair

Over one hundred executives and guests of Owens-Illinois Can Co., Toledo, were entertained at a luncheon, April 25, at the Waldorf-Astoria Hotel, New York, following which they visited the World's Fair grounds for a preview of the Owens display. Owens-Illinois Can Co. shares a display in the Glass Center with the parent company, Owens-Illinois Glass Co., exhibiting the latest developments in glass and metal containers and plastics. Smith L. Rairdon, Owens vice-president, acted as host for the company.

◆

### Colgate Profits Up

Colgate - Palmolive - Peet Co., Jersey City, N. J., reported first quarter profits this year as slightly better than profits in the same period last year, with business volume running at approximately the same level. Earnings for the first three months of 1939 were about at the average for the full year 1938.

◆

### Tell Story of Soap

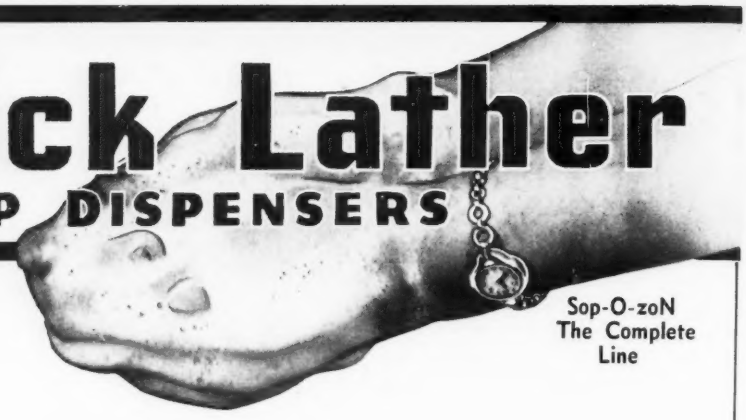
"The Story of Soap" was a featured radio presentation over Station WJZ, New York, the evening of April 27th. The program was one of a series "The Parade of Progress" featuring important products of the grocery industry.

◆

### Charles W. Rusk Dies

Charles W. Rusk, assistant to the advertising manager at Proctor & Schwartz, Inc., Philadelphia, died unexpectedly on April 22nd. Mr. Rusk, who was in his fifty-seventh year, had been connected with the Proctor advertising department for over twenty years.

# Bobrick Lather
## SOAP DISPENSERS



33 Years Experience
Manufacturing Soap
Dispensing Equipment

Sop-O-zoN
The Complete
Line

## THESE SEVEN FAMOUS MODELS NOW AVAILABLE IN LATHER

**Model No. 861 Wall Type Gravity Valve**

Beautiful new streamlined design, solid bronze body. Valve parts all made from stainless steel. Solid bronze piston with stainless steel insert and stainless steel cable which works back and forth through piston at each stroke, thus guaranteeing against clogging, so prevalent in most lather dispensers.

The valve mechanism in all Bobrick Lather Dispensers is identical in construction with the famous C-860 Gravity Valves. Over a half million liquid soap dispensers with this construction have been sold. Many have been in use for 15 years and are still giving good service.

**Model No. 868**
**Pullman Gravity**

The ideal valve for basin installations on gravity feed systems.

Solid bronze body and spout with stainless steel inserts and valve parts.

Complete with tail-stock and union. Standard model now made to fit basins up to 3½ inches thick.

**Model No. 41 Wall Type**

The soap being above the valve, Sop-O-zoN dispensers never lose their prime, and washers do not dry out or have to be adjusted. Fully streamlined, bronze body and bracket, chromium plated. Stainless steel valve parts. Wall fastenings concealed. Lock top. One-hand operation delivers soap in the palm of the hand. As the soap feeds from below, soap and water do not splash on the dispenser to make it messy and dirty.

**Basin Types**
**Model No. 899 Straight Globe**
**Model No. 894 Pear Shaped**

Fills from the top without removing glass jar. Straight jar is standard model. Pear-shaped jars can be furnished for small or special basins. Both models now furnished with shanks to fit basins up to 3½ inches thick. Bronze body, stainless steel valve parts and inserts.

**Model No. 45—Pint Capacity**
**Model No. 47—2½ Pints**

Heavy pressed-steel body, white porcelain enamel finish. Bronze valve body. Pressure of operation directly against the wall, not against body of the dispenser. Stainless steel valve parts, lock top. Concealed fastenings. Cannot be stolen. Ideal for schools, service stations and other places where dispensers receive extraordinarily hard use.

**BOBRICK** MANUFACTURING CORPORATION

15 EAST 26th STREET
NEW YORK CITY

111-117 SO. GAREY STREET
LOS ANGELES, CALIF.

# Public Contracts Board Sets 40c. Minimum Soap Industry Wage

THE U. S. Public Contracts Board, after deliberating for almost nine months on the testimony presented to it at a hearing in Washington, July 13, 1938, has recommended to the Secretary of Labor that the prevailing minimum wage for workers in the soap industry engaged in producing soap for purchase under government contract be set at 40c per hour. On the recommended work week of 40 hours, a minimum wage of $16.00 per week would be required on either a time or piece work basis. The board made no provision in its recommendation for any geographical wage differential. Neither did it accede to the request of the industry, as outlined at the hearing last summer, for a tolerance for light task workers.

The recommendations of the Public Contracts Board were made public April 19 in a bulletin signed by L. Metcalfe Walling, administrator. The industry was advised that briefs could be filed with the administrator within 14 days. SOAP was advised that over a dozen medium sized manufacturers who employ "light task" workers will call the attention of the Department to the necessity of some tolerance for employees of this type.

In announcing its decision the board indicated it was of the opinion that the prevailing minimum wage in the soap industry lies in the bracket of wage earners receiving between 37.5c and 42.5c per hour. A survey made by the Bureau of Labor Statistics showed 303 workers in this group out of a total of 3,165 workers surveyed. "There is no single occupation in the soap industry," said the board's report, "which includes all or even most of the unskilled workers. A group known as 'light task workers' approaches such an occupational class, but a number of occupations combine to make the light tasks, such as hand packaging, hand filling, racking, trimming, or working on a conveyor line. The relative size of this group varies widely among different companies, from none at all to approximately 75 per cent of the total workers. The Board is of the opinion that in the wide divergencies among the different firms with respect to occupational requirements lies an insuperable obstacle to the use of any occupational group in finding the prevailing minimum wage, and finds that the midpoint of the 37.5-42.5 cent bracket, or 40 cents, is the prevailing minimum wage.

"Of the 7,143 employees covered by the survey of the Bureau of Labor Statistics, only 49 were designated as apprentices and learners. This represents considerably less than 1 per cent, and the Board does not regard such a small proportion of sufficient magnitude to justify a special tolerance. Nor is there evidence in the record which would lead the Board to suggest a tolerance for superannuated and handicapped workers. The Bureau's survey gives no indication of the employment of such workers in the soap industry.

"The survey of the Bureau of Labor Statistics did not cover Southern establishments, but the states included in the survey produced in 1935 approximately 96 per cent of the total national output. Very little evidence was given at the hearing with respect to Southern plants. The Board is of the opinion that the information received is insufficient, to justify the setting up of a geographical wage differential. On the other hand, the Board recommends that if Southern firms should in the future be deprived of government contracts because of this wage determination that they be given another opportunity to file complete information with the Board for further consideration."

♦

## Withdraw Oil Tax Amendments

The proposal to increase processing taxes on imported fats and oils from the present rate of 3c per pound to a figure of 5c per pound seems to have been effectively stopped for the moment, according to reports from Washington. With the proposed amendments to H. R. 3790 rejected by the Senate Finance Committee, and facing overwhelming defeat on the Senate floor, it was indicated that Senators Bailey, Connally and Gillette would not push their fight farther at the moment. President Roosevelt had warned that he would veto H. R. 3790, if passed with the excise tax increase as a rider. It is now thought that the excise tax increase may be revived again later in the session and attached to a bill which can less easily be vetoed.

♦

## Gum Naval Stores Loans

The Agriculture Adjustment Administration has recently announced that loans not to exceed $18,000,000 will be available to producers of gum naval stores in 1939. The loan is intended to supplement the naval stores conservation program and assist in stabilizing the market during the season of heaviest production. Under this program loans will be made only to producers of gum turpentine and gum rosin who comply with the 1939 conservation plan. As is the case of the 1938 naval stores loan, the new program includes a marketing plan designed to keep the loan stocks moving in the channels of trade. The loan rates on rosin are $5.75 per 280-pound barrel for "H" grade, with proper differentials for other grades. The maximum quantity on which rosin loans will be made is 1,333,333 round barrels.

♦

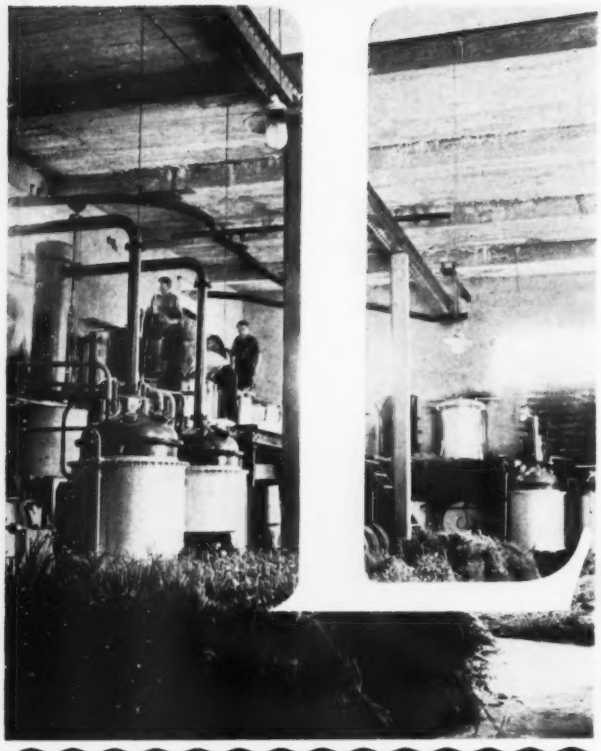
## Grocery Mfrs. to Meet

The Associated Grocery Manufacturers of America, will hold their mid-year meeting at the Greenbriar, White Sulphur Springs, W. Va., May 8-9.

♦

## Thomas E. Waters Dies

SOAP has just been advised of the death of Thomas E. Waters, for many years head of the bulk soap department of Procter & Gamble Company.



Battery of volatile solvent extractors in our Seillans plant

# Distilled Lavender Oils and Concretes

**In any grade lavender you might require, we can guarantee outstanding values. Write us for quotations on these or other popular lavender specialties included in our line:**

**LAVENDER FLOWERS, Drôme—38/42% Ester**

**LAVENDER FLOWERS—35/38% Ester**

**LAVENDER FLOWERS—30/32% Ester**

**LAVENDER FLOWERS, Technical**—Low in cost and very powerful.

**LAVENDER FLOWERS, CONCRETE, Colorless**—Ideal for white soaps; high fixation; volatile constituents retained; fragrance smooth, strong and enduring.

**LAVANDIN** — A hybrid lavender of great usefulness in blending.

**SOAP MANUFACTURERS will find it well worth their while to let us quote them on their next lavender requirements. They will profit by the purchasing advantages our organization enjoys through its first hand connections in Seillans and throughout the adjacent lavender producing regions of Southern France. Such connections enable us to buy the choicest lavenders from grower-producers direct—and at lower cost.**

**Remember this when you're in the market for distilled lavender oils or concretes . . . and let us quote you.**

**FRITZSCHE BROTHERS, Inc.**

**PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.**

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

# A *Fritzsche* PRODUCT for EVERY PURPOSE . . .

- **ESSENTIAL OILS**

  Your basic materials should be the finest that modern methods and scientific skill can produce. In using FRITZSCHE'S Essential Oils you are assured matchless purity and dependability.

- **AROMATIC CHEMICALS**

  Large selection and superlative quality characterize the materials in this group. Use them for finer aromatic effects and for greater economy.

- **FIXATIVES**

  We carry a complete line of fixatives, including Rose Crystals, one of the best all-around fixatives, also a group of Artificial Animal Scents—Musk, Civet, Castoreum and Ambergris—especially adaptable to soap making.

- **ANTI-OXIDANTS**

  These recently developed preservatives for soaps, animal and vegetable fats and oils are highly important to the soap manufacturer. Write us for full details concerning Oxidex.

- **BATH SALT PERFUMES**

  Combining perfume and color, our delightful Bath Perstels greatly simplify and facilitate the process of manufacture. Very economical. Complete information and list of blends will be sent upon request.

- **INSECTICIDES AND DISINFECTANTS**

  All materials offered by us under this heading are the result of years of research applied to this increasingly important phase of perfuming. Selection from the FRITZSCHE catalog assures uniform and unvarying quality of odor.

- **DEODORIZING COMPOUNDS**

  Technical products such as para blocks, naphthalene, cleansers, waxes, polishes, solvents, diluents, etc., require good, dependable deodorizing compounds in their formulae. For effective, low cost coverage we offer and recommend in addition to Neutroleum—Safrella, Javollal, Methalate "C", and others.

- **TOILET SOAP COMPOUNDS**

  Perfumes in this group have been specially prepared to meet the exacting demands of soap manufacture. Exquisite scents at a minimum cost. Consult our catalog.

- **LIQUID SOAP AND SHAMPOO PERFUMES**

  These perfumes are highly soluble and mix readily with liquid soaps. Simple to use, cost limits and strength of odor desired determine quantity required.

- **DENTAL AND ORAL FLAVORS**

  These flavors are of a special character, skillfully blended to impart pleasant, clean, refreshing taste effects. We are prepared also to create special flavor blends according to your specifications and for your exclusive use. Consult us freely.

- **SOAP COLORS**

  We supply soap colors to produce any desired tint. Send us description or sample of color to be matched for our specific recommendations.

**SEND FOR SAMPLES**


### Chicago Perfumery Stag Party

Nearly two hundred members and guests attended the Spring Stag party of Chicago Perfumery, Soap and Extract Association at the Stevens Hotel on April 19th. The party was primarily a celebration of the closing of the Perfumers' bowling league season. This was the first year the association sponsored an official A. B. C. league and was the most successful season since bowling became a regular activity of the group. The Lilacs, captained by Herbert Rothschild won the team championship and T. H. Randecker the individual title. Following dinner, prize money was awarded to all the bowlers. A floor show followed the award of the prize money. After the floor show drawings were held for door prizes. Harry Spohr is the new president of the bowling league and plans are now under way for member companies of the association to sponsor a bowling team during the 1939-40 season.

♦

### To Offer Awards

*Toilet Requisites*, retail magazine of the perfume and cosmetic industry, has announced the establishment of four annual awards to be presented each year to those manufacturers who have sponsored the best package, the best promotion, the best advertising and the best merchandising policy during the year. A group of prominent buyers and merchandising managers will act as judges in determining the winners of the awards for 1939.

♦

### Wants Soap Agency

A firm in Colombo, Ceylon, is interested in the purchase of American manufactured soaps. Interested parties may obtain further particulars by writing to the U. S. Bureau of Foreign and Domestic Commerce referring to File No. 1323.

♦

### P. & G. Statistician Dies

Elmer A. Royer, statistician for Procter & Gamble Co., Cincinnati, died in that city, April 4, after a prolonged illness. He was thirty-four years of age and is survived by his wife.

"A *lot* of American Can's customers started small. They are interested in the packaging of *any* new product, however small it starts. They look ahead—and try to help it to grow. It's to *our* advantage, too, to work with them and have their technical men, research men and marketing people interested in the success of our product."

CANCO AMERICAN CAN COMPANY, 230 PARK AVENUE, NEW YORK, N. Y.

# Contracts Awarded

### Marine Corps Soap Bids

Armour & Co., Chicago, submitted the low bid of 2.99c on 9,984 lbs. soap powder in a recent opening by the U. S. Marine Corps at Washington, D. C. At the same opening N. Brittingham & Sons, Philadelphia, was low on 100 lbs. soap with a bid of 9.27c.

### Automobile Soap Bid

Harley Soap Co., Philadelphia, was low with a bid of 3.9c on 1,500 lbs. automobile soap in a recent opening by the Treasury Procurement Supply Division at Washington, D. C.

### Rock Island Soap Award

Swift & Co., Rock Island, Ill., was awarded the contract on 12,600 lbs. soap powder at $359.10 in a recent opening by the U. S. Army Engineer Corps at Rock Island.

### Washington Soap Bids

Colgate - Palmolive - Peet Co., Jersey City, N. J., bid low on 64,500 lbs. soap at 6.02c in a recent opening by the Treasury Procurement Supply Division at Washington, D. C. In another opening by the same department, Dixie Janitor Supply Co., Washington, bid low on 300 lbs. soap at 23.5c.

### Panama Canal Soap Bids

Colgate - Palmolive - Peet Co., Jersey City, N. J., bid low on 10,000 cakes toilet soap at $103.48 in a recent opening for the Panama Canal at Washington, D. C. They were also low on 6,000 lbs. salt-water soap at $144. At the same opening, Newell-Gutradt Co., San Francisco, submitted the low bid of $487.50 on 15,000 lbs. laundry soap and Conray Products Co., New York, bid low on 10,000 lbs. trisodiumphosphate at $410.

### Washington Soap Bids

Harley Soap Co., Philadelphia, was low bidder on 1,500 lbs. automobile soap at 3.9c in a recent opening by the Treasury Procurement Supply Department at Washington, D. C. Armour & Co., Chicago, was low with a bid of 9.67c on 5,000 lbs. toilet soap in another opening by the same department.

### Chicago Polish Award

Mirax Chemical Corp., St. Louis, was awarded the contract on 1,500 cans metal polish at 7.4c a can to be supplied to the U. S. Army Quartermaster at Chicago.

### Disinfectants Bid

Crystal Soap & Chemical Co., Philadelphia, submitted the low bid of 39.5c on 1,650 gals. disinfectants in a recent opening by the Treasury Procurement Supply Division at Washington, D. C.

### Post Office Cleaner Bid

Baltimore Paint & Color Works, Baltimore, submitted the low bid of 43c on 4,000 gals. cleaner in a recent opening by the Post Office Supply Department at Washington, D. C.

### Laundry Soap Bid

Armour & Co., Chicago, bid low on 100,000 lbs. laundry soap at 2.02c in a recent opening by the Treasury Procurement Supply at Washington, D. C.

### Metal Polish Award

R. M. Hollinshead Corp., Camden, N. J., was awarded the contract on 900 pints metal polish at 7.3c in a recent opening by the Army Quartermaster at Ft. Sam Houston, Texas.

### Treasury Supply Bids

Cole Chemical Co., Long Island City, New York, submitted the low bid of 15.8c on 5,500 gals. soap in a recent opening by the Treasury Procurement Supply at Washington, D. C. Kirkman & Son, Brooklyn, was low on 100,000 cakes soap at 2.23c. In another opening by the same department, Colgate-Palmolive-Peet Co., Jersey City, N. J., bid low on 8,100 lbs. soap at 8.34c and Interboro Chemical Co., New York, bid low on 864 packages trisodiumphosphate at 4.6c.

### Army Ordnance Soap Award

Kranich Soap Co., Brooklyn, was awarded the contract on 5,000 lbs. castile soap at 11.9c in a recent opening by the Army Ordnance at Raritan Arsenal, N. J.

### Veterans Supply Soap Bids

Kranich Soap Co., Brooklyn, submitted the low bid of $67.20 on 480 lbs. hard soap in a recent opening by the Veterans Administrative Procurement Division at Washington, D. C. At the same opening, they also bid low on 60 cartons hard soap at $84 and on 42 cartons hard soap at $60.90.

### Cresylic Disinfectant Bids

R. M. Hollingshead Corp., Camden, N. J., bid low on 1,000 gals. cresylic disinfectant at $490 in a recent opening by the Veterans Administrative Supply Division at Washington, D. C. In the same opening they also bid low on another item of 1,000 gals. cresylic disinfectant at the same price, $490.

### California Soap Award

Colgate - Palmolive - Peet Co., Berkeley, Calif., was awarded the contract covering 5,600 lbs. leather equipment soap at 5.22c a lb. for the U. S. Army Ordnance at Benecia Arsenal, Calif.

### Faverjon To Visit U. S.

J. Faverjon, general manager, Payan & Bertrand, essential oils, Grasse, France, will arrive in New York May 10, to start his trip throughout the United States with Gerald J. Danco, president. Gerald J. Danco, Inc., New York, who is the agent in this country and Canada for the Payan & Bertrand Co. Mr. Faverjon will bring samples of several new products with him.

Better
SEALING
Sealing pressure is exerted downward and is equalized around the entire circumference—due to under grip of cap thread and accurate matching with glass thread—no tilting of caps, no binding of threads.
IMPROVED
Speedier
APPLICATION
Abrupt thread start avoids cross-threading, speeds application—caps spin on easily without wedging—chucks grip straight sides readily.
Easier
REMOVAL
Reduced friction, absence of interference, extra flexibility in the cap facilitates removal—good, generous gripping surface for the fingers.
Finer
APPEARANCE
A trim, neat, handsome cap—best looking on the market—with straight side-walls, finer knurling, neatly rolled wire edge.
ANCHOR
C.T. CAPS

● If you haven't compared Anchor *Improved* C. T. Caps with the usual continuous thread cap you should do so . . . because it's outstanding in a number of important respects . . . in its looks, as well as in the way it functions. We have indicated above the most important of these advantages. The improvements in design and in manufacture represent a great advance in cap construction, an advance which, translated into terms of service, means greater efficiency, better protected packages and consumer good will.

**STYLES AVAILABLE**—In addition to the standard jar cap shown above, the improved construction of the Anchor C. T. Cap has been incorporated in the following styles: C. T. Bottle Cap; NKCT Cap, without knurling or bead; Shellback Cap, the inner shell carrying the thread construction and the outer shell for appearance; the Two-piece C. T. Cap and the Gasket Lined C. T. Cap, for products requiring vacuum packing, sterilization or processing.

**DECORATED CAPS**—For greater sales appeal, for improved appearance and for reproducing names, trade-marks, slogans, instructions, recipes, etc., use decorated C. T. Caps. All styles are available, coated in black, white and colors, or lithographed with multi-colored private designs at slight additional cost. ANCHOR CAP & CLOSURE CORPORATION, Long Island City, New York and Toronto, Canada. *Closure Division of Anchor Hocking Glass Corporation.*

ANCHOR HOCKING GLASS CAPS
*-an unbeatable combination*

# New Trade Marks

The following trade-marks were published in the April issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

**Trade Marks Filed**

M B C—This in solid letters with the "B" and "C" enclosed by the "M", describing cleansing agent. Filed by General Chemical Co., New York, May 23, 1938. Claims use since Jan., 1930.

CHICK—This in script letters describing cleanser. Filed by Chick Laboratories, Bryan, Ohio, Dec. 1, 1938. Claims use since Nov. 9, 1938.

MIRACLE—This in solid letters describing bath salts. Filed by Lentheric, Inc., New York, Jan. 11, 1938. Claims use since Aug. 19, 1924.

BREATHLESS — This in solid letters describing bath salts. Filed by Parfums Charbert, Inc., New York, Dec. 16, 1938. Claims use since Dec. 7, 1938.

THREE FOLD — This in solid letters describing scalp conditioner. Filed by Three Fold Products Co., Louisville, Dec. 23, 1938. Claims use since Nov. 4, 1938.

PRESENTATION—This in solid letters describing bath salts. Filed by Houbigant, Inc., New York, Jan. 10, 1939. Claims use since Jan. 6, 1939.

CLEANSOL — This in outline letters within oblong figure, describing hair tonic. Filed by Tropic Medical Products Co., Brooklyn, Jan. 18, 1939. Claims use since Feb., 1918.

LACTONA—This in solid letters describing dentifrice. Filed by Lactona, Inc., St. Paul, Jan. 20, 1939. Claims use since May 16, 1928.

LUCKY MON-GOL—This with "Lucky" in solid letters above "Mon-Gol" in script, describing various shampoos. Filed by Lucky Mon-Gol Co., Memphis, Jan. 27, 1939. Claims use since Sept. 1, 1938.

PERX—This in script letters describing tooth paste. Filed by Perx Co., Chicago, Jan. 28, 1939. Claims use since Dec. 2, 1938.

CHIEFTAIN—This in solid letters beneath picture of Indian. Filed by Sinclair Manufacturing Co., Toledo, Ohio, Feb. 3, 1939. Claims use since Sept., 1911.

CALEX—This in solid letters describing bleach. Filed by Walker Manufacturing Co., Los Angeles, Feb. 6, 1939. Claims use since Dec. 5, 1938.

XYNOMINE—This in solid letters describing detergent. Filed by Onyx Oil & Chemical Co., Jersey City, N. J., Feb. 8, 1939. Claims use since May, 1938.

PRELUDE—This in solid letters describing bath salts. Filed by Jaquet, Inc., New York, Feb. 15, 1939. Claims use since Mar. 12, 1928.

THE WILSHIRE MAN—This in script letters with silhouetted face between "Wilshire" and "Man" describing hand soap. Filed by Bullock's, Inc., Los Angeles, March 30, 1937. Claims use since Jan. 8, 1937.

CLEAN MORE—This in outline letters, mounted upon a lined background of contrasting color with a seal in lower corner entitled "Clean More Quality," describing cleaning compound. Filed by Mahala Brothers, Gary, Ind., June 30, 1938. Claims use since Feb. 1, 1938.

KLE-NOX—This in solid letters, beneath oval containing word "plee-zing," describing cleaning preparation. Filed by Plee-zing, Inc., Chicago, Dec. 23, 1938. Claims use since Feb. 1, 1938.

JUNO—This in outline letters, beneath which are bubbles, describing cleanser. Filed by Linco Products Corp., Chicago, Dec. 30, 1938. Claims use since Oct. 27, 1938.

SU-DOX—This in small outline letters, in lower part of triangle in the top of which are the letters "SCC," describing dry cleaning compound. Filed by Sudox Chemical Co., Louisville, Ky., Feb. 3, 1939. Claims use since Jan. 10, 1939.

ETHEL LEA-NORE — This in script letters describing bath crystals. Filed by Ethyl Lea Nore, Inc., New York, Aug. 5, 1938. Claims use since Oct. 11, 1935.

BULBOCAPILLINA — This in solid letters above monogram with the letters L, B and R. Filed by Antonio Bilotti, Clifton Heights, Pa., Feb. 23, 1939. Claims use since Feb. 7, 1938.

TIP-TOP—This in outline letters describing floor wax. Filed by Thompson Chemical Co., Cranston, R. I., Oct. 2, 1937. Claims use since Jan. 1, 1929.

DURE-O-WAX—This in solid letters describing floor wax. Filed by R. A. Myers & Co., St. Paul, May 5, 1938. Claims use since Oct., 1937.

DART—This in solid letters, above arrow, describing shaving cream. Filed by S. H. Kress & Co., April 23, 1938. Claims use since March 14, 1938.

KEM KEL—This in solid letters describing cleaning compound. Filed by North Distributing Co., Houston, Tex., Jan. 20, 1939. Claims use since Jan. 5, 1939.

KIX—This in stenciled letters describing soap flakes. Filed by The J. R. Watkins Co., Winona, Minn., Feb. 6, 1939. Claims use since March 10, 1927.

CLO-WHITE—This in outline letters describing laundry bleach. Filed by Coastal Chemical Co., Savannah, Ga., Jan. 16, 1939. Claims use since Dec. 24, 1938.

LUSTRE LIFE—This in outline letters, mounted upon oval of contrasting color, describing liquid wax. Filed by Bennett Inc., Cambridge, Mass., Feb. 3, 1939. Claims use since May 5, 1936.

TRIMFOOT—This in solid letters, beneath which are the words "A Trimfoot Shoe Cosmetic" and a circle enclosing the letters "S T C," describing shoe cleanser. Filed by

# CYANAMID T·S·P·P

(TETRA SODIUM PYRO PHOSPHATE, ANHYDROUS)

## FOR SOAPS THAT PLEASE THE MODERN WOMAN

To the manufacturer of soaps, soap powders and cleaning compounds, Cyanamid's Tetra Sodium Pyro Phosphate brings a new detergent aid combining remarkably effective water softening power, low pH, ready solubility, strong emulsifying power and unusual stability in water solution.

Few ingredients developed in recent years have offered more new and interesting opportunities to the soap industry for merchandising its products to the modern woman and to the soap consuming public in general.

Following are a few of the ways its properties can be translated into selling terms.

**MORE AND BETTER SUDS**—In dishwashing and home laundry work, and in large scale commercial operations of this nature, fast sudsing is highly important. Tetra Sodium Pyro Phosphate is one of the most effective products available for producing a rich lather speedily.

**KINDNESS TO HANDS**—Because of its low alkalinity Tetra Sodium Pyro Phosphate reduces the danger of skin becoming red roughened in washing laundry or dishes—a boon to modern women who consider chapped hands a social liability.

**KINDNESS TO FABRICS**—Here again the low alkalinity of Tetra Sodium Pyro Phosphate is an advantage to be stressed to the user of soap, since it brings a new safety in washing delicately colored fabrics which would be harmed by the strong alkalies ordinarily used as ingredients.

**FASTER RINSING**—The highly effective action of Tetra Sodium Pyro Phosphate as a water softener—preventing the formation of insoluble calcium and magnesium compounds—makes rinsing quicker, easier and cleaner.

**CLEANER WASHES WITH A BETTER ODOR**—Because Tetra Sodium Pyro Phosphate possesses remarkable emulsifying properties—the ability to hold dirt particles in suspension so that they will not be redeposited on the articles being washed—its use results in cleaner laundry washes. At the same time it assures a more pleasant smelling "pack" since it reduces the danger of rancid "soap scum" being retained in the fabric.

**A TIME AND LABOR SAVER IN DISHWASHING**—Tetra Sodium Pyro Phosphate readily emulsifies the greasy deposits left on dishes, glasses, pots and pans, and reduces the drudgery of this work for the housewife. And in hotels and restaurants, where power machinery is used, this not only speeds up dishwashing but reduces labor costs and gives more thoroughly clean results.

**STABILITY IN SOLUTION**—Because Tetra Sodium Pyro Phosphate is unusually stable in water solutions it can be used in work that calls for high temperatures.

**IF YOU MAKE SOAP OR ANY TYPE OF CLEANING COMPOUND**

consider the possibilities of improving your product and merchandising the advantages obtained through the use of Cyanamid's Tetra Sodium Pyro Phosphate.

**AMERICAN CYANAMID & CHEMICAL CORPORATION**

30 ROCKEFELLER PLAZA NEW YORK, N. Y.

Wizard Lightfoot Appliance Co., St Louis. Aug. 19, 1938. Claims use since July 6, 1938.

K g P—This in solid letters describing liquid detergent. Filed by Morton S. Pine Co., Cleveland, Jan. 13. 1939. Claims use since Sept. 1, 1938.

SEALCO—This in outline letters within a semi-circle of contrasting color, describing polishes. Filed by Sealco By-Products Co., Bluefield, W. Va., Jan. 17, 1939. Claims use since Dec. 19, 1938.

AQUASCENT — This in solid letters describing soap compounds. Filed by The Emfo Corp., New York, Feb. 15. 1939. Claims use since Sept. 21. 1938.

GENUPINE—This in solid letters describing soap compounds. Filed by The Emfo Corp., New York, Feb. 15, 1939. Claims use since Sept. 21. 1938.

ZADEX—This in solid letters describing toilet soap. Filed by George M. Litsch, Mahanoy City, Pa., Feb. 23, 1939. Claims use since Jan. 16. 1939.

ETTA—This in fancy letters within heart-shaped figure with words "Un Souvenir De Budapest" around inner edge of figure, describing bath salts. Filed by Etta Perfumes, New York, Dec. 21, 1937. Claims use since Nov. 15, 1937.

DON'T SCRATCH — This in small letters, half of which is enclosed in circle containing portrait of a man scratching his head, also similar figure with portrait of woman, describing dandruff remover shampoo. Filed by Four Penny Products Co., Chicago, Feb. 13. 1939. Claims use since Nov., 1936.

TRU-TEST—This in solid letters describing auto wax. Filed by Tru Test Marketing and Merchandising Corp., Chicago. Dec. 22. 1938. Claims use since July, 1937.

SALEM—This in script letters describing glass cleaner. Filed by Salem Chemical & Supply Co., Salem, Mass., Jan. 28. 1939. Claims use since 1893.

LE CLIFF—This in solid letters describing shoe polishes. Filed by Le Cliff Distributing Co., Cedar Lake, Ind., Feb. 2, 1939. Claims use since Dec. 16, 1938.

TRIX — This in solid letters describing soap cleaner. Filed by George J. Praechtl, Pine Hill, Buffalo, Jan. 30, 1939. Claims use since Nov. 9, 1938.

DENT-A-FOAM—This in solid letters describing cleaner for dental plates. Filed by Dent-A-Firm Laboratories, Inc., Chicago, Feb. 4, 1939. Claims use since Jan. 28, 1939.

REX—This in solid letters beneath which is a solid line describing polishing pads. Filed by The N & W Manufacturing Corp., Dunellen, N. J., Feb. 7, 1939. Claims use since Jan. 1, 1939.

PEPTEX—This in solid letters describing cleanser. Filed by The Diversey Corp., Chicago, March 1, 1939. Claims use since Jan. 10, 1939.

SCALITE—This in solid letters describing cleanser. Filed by The Diversey Corp., Chicago, March 1, 1939. Claims use since Jan. 16, 1939.

ORGANITE—This in solid letters describing water softener. Filed by The Organite Co., Detroit, Sept. 7, 1938. Claims use since Aug. 1, 1938.

BLUE BAND—This in solid letters describing scouring agent. Filed by Ecclestone Chemical Co., Dec. 28. 1938. Claims use since Jan. 1, 1938.

PYCOPE—This in script letters beneath which is printed "py-ko-pay," describing tooth powder. Filed by Pycope Inc., Jersey City, N. J., Jan. 4, 1939. Claims use since December, 1937.

SALEM—This in script letters describing insecticides. Filed by Salem Chemical & Supply Co., Salem, Mass., Jan. 28, 1939. Claims use since 1893.

## Trade Marks Granted

366,172. Insecticides. An-Fo Manufacturing Co., Oakland, Calif. Filed December 20, 1937. Serial No. 401,077. Published February 22, 1938. Class 6.

366,174. Insecticides. Liberty Laboratories Corp., Boston. Filed December 28, 1937. Serial No. 401,308. Published January 17, 1939. Class 6.

366,194. Hair Tonic. Paul Westphal Inc., New York. Filed September 17, 1938. Serial No. 410,712. Published January 17, 1939. Class 6.

366,196. Insecticide. Susan Overstreet Parker, Jacksonville, Fla. Filed September 27, 1938. Serial No. 411,037. Published January 17, 1939. Class 6.

366,197. Cleansing Preparation. The Tecor Co., Chicago. Filed October 1, 1938. Serial No. 411,163. Published Dec. 13, 1938. Class 6.

366,202. Shampoo. The Kora Kaye Co., Astoria, Long Island, N. Y. Filed October 10, 1938. Serial No. 411,461. Published January 17, 1939. Class 6.

366,210. Insecticides. McLaughlin Gormley King Co., Minneapolis. Filed October 21, 1938. Serial No. 411,876. Published January 24, 1939. Class 6.

366,244. Shampoos. Asco Chemical Co., New York. Filed November 23, 1938. Serial No. 413,081. Published January 17, 1939. Class 6.

366,251. Insecticides. Durham Chemical Corp., New York. Filed November 29, 1938. Serial No. 413,210. Published January 24, 1939. Class 6.

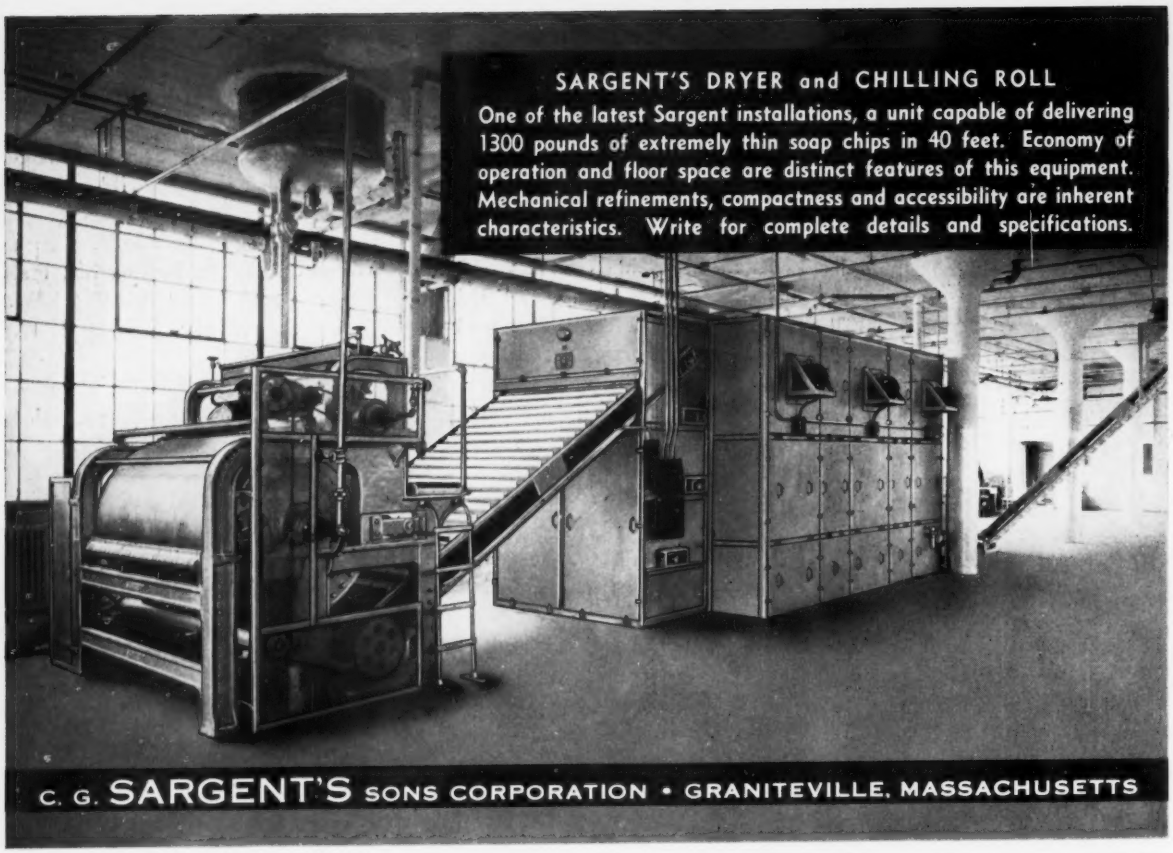
366,252. Insecticides. Durham Chemical Corp., New York. Filed November 29, 1938. Serial No. 413,211. Published January 24, 1939. Class 6.

366,280. Shampoo. Halgar, Inc., Chicago. Filed December 10, 1938. Serial No. 413,670. Published January 24, 1939. Class 6.

366,281. Insecticidal Compositions. Io-Dow Chemical Co., Long Beach, Calif. Filed December 12, 1938. Serial No. 413,713. Published January 24, 1939. Class 6.

366,346. Liquid Wax Polish. Goldsmith Bros., New York. Filed May 25, 1938. Serial No. 406,713. Published January 31, 1939. Class 16.

366,385. Shoe Polish and Cleaner. Paul Cimino, Wilkes-Barre, Pa. Filed October 3, 1938. Serial No. 411,431. Published January 24, 1939. Class 4.



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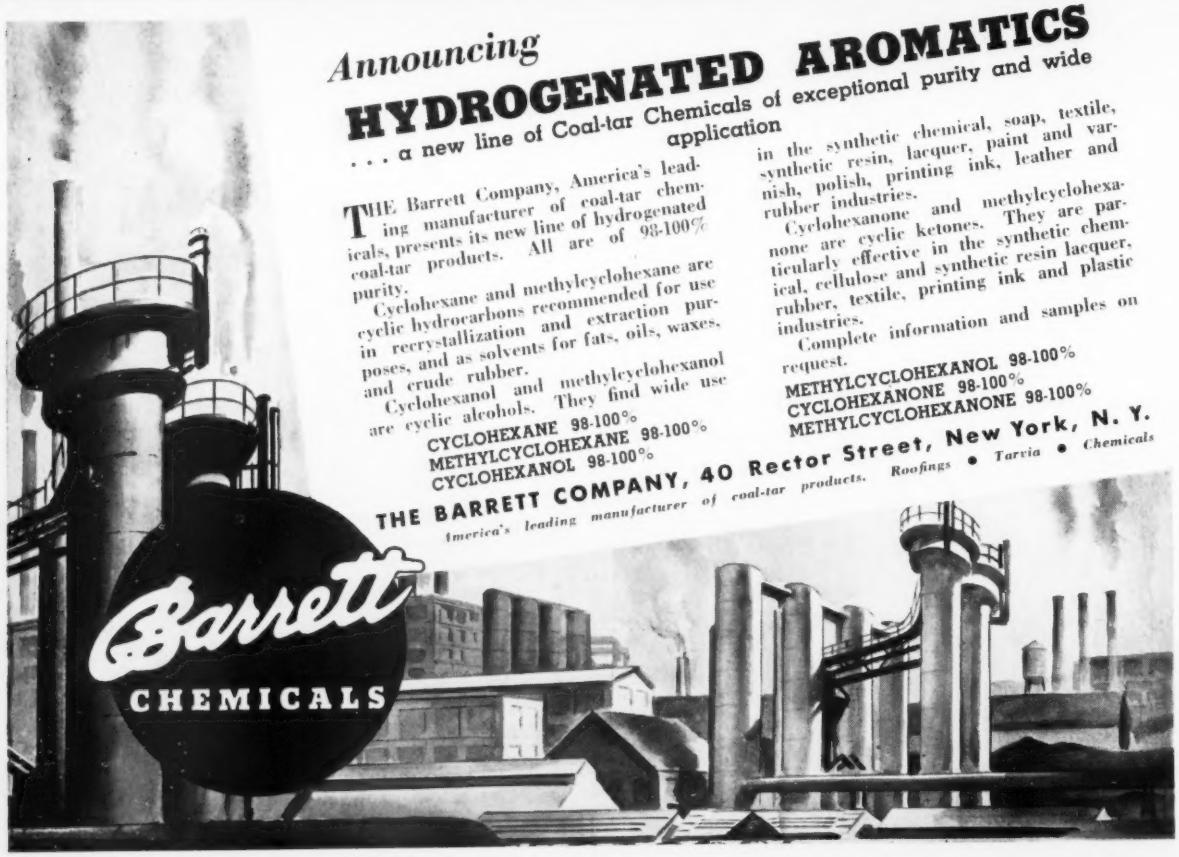

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Barrett CHEMICALS

# Raw Material Markets

**As of April 24, 1939**

NEW YORK—There were a fair number of price changes in the soap and sanitary chemical raw material market this period, but none of any great significance. Rosin, as in the last period, was the only raw material in the chemical list to exhibit a marked change; this being a downward trend. Prices in the oil and fat group were erratic; some moved up while others moved down. Such was also the case in the perfuming materials market. Insecticide materials and gums showed small changes in price, while in the wax market, carnauba showed the only change of note.

## CHEMICALS

### Caustic Soda

Demand in this market did not extend beyond current requirements. Although the usual expansion was not evident, volume was making favorable comparisons with a year ago.

### Carbon Tetrachloride

The satisfactory inquiry noted in the carbon tetrachloride market last period carried over into this period with steady withdrawals. Spot and contract business was reported relatively good with prices remaining unchanged. A strike of the wholesale section of the cleaning and dyeing industry in the New York area has had little effect on shipments of this material. The price range at present is 66½ to 83 cents per gallon in car lots and 73 cents to $1.17 l.c.l.

### Rosins

The outlook in the rosin market was definitely brighter this period, with the announcement of the long-awaited loan program for naval stores production. Under this program, loans not exceeding $18,000,000 will be available to producers of gum naval stores. The loan rates are $5.75 per 280 lb. barrel for "H" grade rosin, with proper differentials for other grades. The total loan, however, was 10 per cent below that requested, and following the announcement there was a drop in the rosin list, some grades easing off as much as 80c a barrel.

### Trichlorethylene

A reduction of 6 to 10 per cent in the prices of industrial and special grades of trichlorethylene and perchlorethylene for dry cleaning and metal degreasing has recently been announced.

## OILS AND FATS

### Coconut Oil

Conditions in the coconut oil market continued quiet this period with quotations on crude oil unchanged. The tone of the market seemed to be fairly steady although an easier copra situation was reported abroad and a downward trend in competing products was noted here. The current price on Manila in tanks, N. Y., is 3⅛ cents.

### Olive Foots

Demand for foots this period was reported better although purchasers were not inclined to buy ahead to any great extent. Now that conditions in Spain have quieted down, it is conceivable that offerings in this market will strike an upward trend. Use of this material, especially in the soap industry, has declined considerably since hostilities began. The current price range on foots is 7 to 7⅛ cents per lb.

### Tallow

The price range in the tallow market showed a ⅛ cent drop during this period. Consumers, however, were inclined to hold off and await further developments. The U. S. Department of Agriculture reports cattle on feed April 1 at 13 per cent larger than a year ago; this increase following one on April 1, 1938 over 1937 of about 20 per cent. The present price of tallow is 5⅛ cents on special and 5¼ cents on extra.

## PERFUMING MATERIALS

### Anise Oil

The price on anise oil moved up 3 cents this period and is now being quoted at 70 to 75 cents. Reports from China indicate that Hongkong will soon regain its standing as the leading export port for this oil. Re-exports of this oil to the United States in 1938 amounted to only 24,660 pounds valued at $17,770 as compared to 119,827 pounds in 1937, valued at $81,700.

### Citronella Oil

Ceylon oil registered a 3 cent drop this period, which more than offset the 2 cent gain noted last period. The price range is now at 31 to 32 cents. The low cost of Java oil, however, continued to check trade in the Ceylon material.

### Patchouli Oil

A 25 cent drop in the price of patchouli oil last period was followed by a 15 cent drop this period, the present quotation being $3.35 to $6.50 per pound. Exports from Singapore in 1938 amounted to 1,597 gallons.

## WAXES

### Carnauba Wax

Readjustment of Brazilian exchange, during the middle of this period, lowered import costs on all grades of carnauba wax. Local quotations, as a result, followed the downward trend of replacement costs. Dealers, however, reported trade very dull with demand on spot not very active. February importations from Brazil totaled 1,455,831 pounds.

### Candelilla Wax

Prices in this market were far out of line with replacement costs. Lack of demand made it necessary to shade prices to a minimum of 15¼c per pound. Local competition prevented the price from raising to a proper parity.

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in

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**Manufacturers in every field of American industry find in ISCO products quality and dependability nowhere excelled!**

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# BOOKS

**Modern Soap Making,** by Dr. E. G. Thomssen and C. R. Kemp. The first entirely original American book on soap manufacture in several years. Thoroughly covers every phase of soap manufacture and glycerin recovery. Written by practical soap men....a truly practical book. Chapter headings: Raw Materials; Machinery and Equipment; Soap Making Methods; Soap Products; Glycerin Recovery and Refining; Analytical Methods; Appendix with reference tables, etc. 450 pages. $7.50 per copy in U. S. Add 50 cents for foreign postage.

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**Hydrogenation of Organic Substances,** by Ellis. Latest revised edition of this well-known book, pre-eminent in the field of hydrogenation. 990 pages, $15.00.

**Laundry Chemistry,** by A. Harvey. A manual on the chemistry of laundry materials and methods. 120 pages, 5 x 7½, $1.75.

**Pyrethrum Flowers,** by Gnadinger. A complete compilation of all known facts on pyrethrum; its history, sources, evaluation, chemistry and uses. The problems involved in the manufacture of pyrethrum products are given thorough and lucid exposition. 396 pages, $5.00.

**"Soap."** Bound volumes for years 1927-28, and 1937 available at $12.00 each.

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**Vegetable Fats and Oils,** by George S. Jamieson. 444 pages. An American Chemical Society Monograph. Covering classification, occurrence, properties, analytical methods, etc., of vegetable oils, fatty acid and other derivatives; also production and refining methods, $6.50.

**Chemistry of Laundry Materials,** by D. N. Jackman. A useful book for the laundry operator, containing valuable information on the chemistry of laundry materials. Discusses alkalies, soaps, bleaches, starches, also the newer detergents, synthetic soaps, etc. 230 pages, $2.50.

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**254 West 31st Street, NEW YORK CITY**

# Raw Material Prices

**(As of April 24, 1939)**

**Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.**

## Chemicals

| | | | |
|---|---|---|---|
| Acetone, C. P., drums | lb. | $ .05¾ | $ .06¼ |
| Acid, Boric, bbls., 99½% | ton | 106.00 | 138.00 |
| Cresylic, drums | gal. | .63 | .64 |
| Low boiling grade | gal. | .69 | .71 |
| Muriatic, C. P., carboys | lb. | .06½ | .08 |
| Oxalic, bbls. | lb. | .10¾ | .12 |
| Adeps Lanae, hydrous, bbls. | lb. | .16 | .18 |
| Anhydrous, bbls. | lb. | .17½ | .19 |
| Alcohol, Ethyl, U.S.P., bbls. | gal. | 4.56½ | 4.59½ |
| Complete Denat., SD 1, drums, ex. | gal. | .27½ | .30½ |
| Alum, Potash lump | lb. | .036 | .038 |
| Ammonia Water, 26°, drums | lb. | .02 | .02¼ |
| Ammonium Carbonate, tech., bbls | lb. | .08 | .12½ |
| Bentonite 1, works | ton | — | 16.00 |
| Bentonite 2, works | ton | — | 11.00 |
| Bleaching Powder, drums | 100 lb. | 2.25 | 3.35 |
| Borax, pd., cryst., bbls., kegs | ton | 58.00 | 74.00 |
| Carbon Tetrachloride, car lots | gal. | .66½ | .83 |
| L. C. L. | gal. | .73 | 1.17 |
| Caustic, see Soda Caustic. Potash Caustic | | | |
| China Clay, filler | ton | 10.00 | 25.00 |
| Cresol, U.S.P., drums | lb. | .10 | .10½ |
| Creosote Oil | gal. | .13½ | .14½ |
| Feldspar (200 to 325 mesh) | ton | 14.00 | 15.00 |
| Formaldehyde, bbls. | lb. | .05¾ | .06¼ |
| Fullers Earth | ton | 10.00 | 30.00 |
| Glycerine, C. P., drums | lb. | .12½ | .13 |
| Dynamite, drums | lb. | — | Nom. |
| Saponification, drums | lb. | .09 | .10 |
| Soap, lye drums | lb. | .07⅝ | .07¾ |
| Hexalin, drums | lb. | — | .30 |
| Kieselguhr, bags | ton | — | 35.00 |
| Lanolin, see Adeps Lanae. | | | |
| Lime, live, bbls. | per bbl. | — | 2.45 |
| Mercury Bichloride, kegs. | lb. | .99 | 1.13 |
| Naphthalene, ref. flakes, bbls. | lb. | .05¾ | .06 |
| Nitrobenzene (Mirbane) drums | lb. | .08 | .09 |
| Paradichlorbenzene, bbls., kegs | lb. | .12½ | .15½ |
| Petrolatum, bbls. (as to color) | lb. | .02⅝ | .03⅞ |
| Phenol (Carbolic Acid), drums | lb. | .14½ | .15½ |
| Pine Oils, bbls. | gal. | .50 | .54 |
| Potash, Caustic, solid | lb. | .06¼ | .06¾ |
| Flake, 88-92% | lb. | .07 | .07½ |
| Liquid, 45% basis | lb. | .03⅛ | .03¼ |
| Potassium Carbonate, solid | lb. | .06½ | .06¾ |
| Liquid | lb. | .03 | .03½ |
| Pumice Stone, powder | 100 lb. | 3.00 | 4.00 |
| Rosins (600 lb. bbls. gross for net)— | | | |
| Grade B to H, basis 280 lbs. | bbl. | 4.45 | 6.15 |
| Grade K to N | bbl. | 6.22 | 6.50 |
| Grade WG to X | bbl. | 7.15 | 7.65 |
| Wood | bbl. | 4.00 | 5.45 |
| Rotten Stone, pwd. bbls. | lb. | .01¾ | .02½ |
| Silica | ton | 20.00 | 27.00 |
| Soap, Mottled | lb. | .04⅛ | .04½ |
| Olive Castile, bars | lb. | .27½ | .30 |
| Olive Castile, powder | lb. | .27 | .38 |
| Powdered White, Neutral | lb. | .20 | .22 |
| Olive Oil Foot, bars, 68-70% | lb. | .09 | .09½ |
| Green, U.S.P. | lb. | .11 | .13½ |
| Tallow Chips, 88% | lb. | .07⅝ | .07⅞ |
| Soda Ash, cont., wks., bags, bbls. | 100 lb. | 1.08 | 1.35 |
| Car lots, in bulk | 100 lb. | .90 | .95 |
| Soda Caustic, cont., wks., solid | 100 lb. | — | 2.30 |
| Flake | 100 lb. | — | 2.70 |
| Liquid, tanks, 47-49% | 100 lb. | — | 1.95 |
| Soda Sal., bbls. | 100 lb. | $1.10 | $1.30 |
| Sodium Chloride (Salt) | ton | 15.00 | 15.60 |
| Sodium Fluoride, bbls. | lb. | .07½ | .08¾ |
| Sodium Hydrosulfite, bbls. | lb. | .16 | .17 |
| Sodium Metasilicate, ground | 100 lb. | 2.20 | 3.15 |
| Crystalline | 100 lb. | 2.90 | 4.20 |
| Sodium Pyrophosphate | 100 lb. | 5.10 | 5.55 |
| Sodium Silicate, 40 deg., drum | 100 lb. | .80 | 1.20 |
| Drums, 52 deg. wks. | 100 lb. | 1.40 | 1.80 |
| Tar Acid Oils, 15-25% | gal. | .21 | .28 |
| Triethanolamine | lb. | .19 | .20 |
| Trisodium Phosphate, bags, bbls. | lb. | .02 | .026 |
| Zinc Oxide, lead free | lb. | .06½ | .07¾ |

## Oils — Fats — Greases

| | | | |
|---|---|---|---|
| Babassu, tanks, futures | lb. | .06½ | Nom. |
| Castor, No. 1, bbls. | lb. | .08¾ | .09½ |
| No. 3, bbls. | lb. | .08¼ | .09 |
| Coconut (without excise tax) | | | |
| Manila, tanks, N. Y. | lb. | .03⅛ | — |
| Tanks, Pacific Coast, futures | lb. | .02¾ | .02⅞ |
| Copra, bulk, coast | lb. | .018 | — |
| Corn, tanks, mills | lb. | .06⅛ | .06¼ |
| Cottonseed, crude, tanks, mill | lb. | .05¾ | .05⅞ |
| PSY, futures | lb. | .07 | .07¼ |
| Fatty Acids, | | | |
| Corn Oil, tanks | lb. | .08¾ | .09 |
| Coconut Oil, tanks | lb. | .08¼ | .08⅝ |
| Cotton Oil, tanks | lb. | .08¼ | .08½ |
| Settled soap stock | lb. | .03 | .03⅛ |
| Boiled soap stock, 65% | lb. | .04 | .04⅛ |
| Foots, 50% | lb. | .01⅜ | .01½ |
| Linseed Oil | lb. | .08 | .09 |
| Red Oil, bbls., dist. or sapon. | lb. | .07⅜ | .08⅛ |
| Tanks | lb. | .06½ | .07½ |
| Stearic Acid, | | | |
| Double pressed | lb. | .10½ | .11½ |
| Triple pressed | lb. | .13½ | .14½ |
| Greases, choice white bbls. | lb. | .05⅛ | .05½ |
| Yellow | lb. | .04⅞ | .05 |
| Lard, city | lb. | .06½ | .06¾ |
| Linseed, raw, bbls. | lb. | .0880 | .0900 |
| Tanks, raw | lb. | .0820 | .0840 |
| Boiled, 5 bbl. lots | lb. | .0960 | .0980 |
| Olive, denatured, bbls., N. Y. | gal. | .84 | .85 |
| Foots, bbls., N. Y. | lb. | .07 | .07⅛ |
| Palm, shipment | lb. | .03 | — |
| Palm Kernel, shipment | lb. | .0340 | Nom. |
| Sesame Oil, dms. | lb. | .09 | .09¼ |
| Soya Bean, domestic tanks, crude | lb. | .05½ | — |
| Stearine, oleo, bbls. | lb. | .05¼ | .06 |
| Tallow, special, f.o.b. plant | lb. | .05⅛ | — |
| City, ex. loose, f.o.b. plant | lb. | .05¼ | .09¾ |
| Teaseed Oil, crude | lb. | .09½ | .09¾ |
| Whale, refined | lb. | .0770 | .0790 |

# RAW MATERIALS 1838-1939

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Olive Oil Foots
Peanut Oil
Perilla Oil
Rapeseed Oil
Sesame Oil
Soya Bean Oil
Teaseed Oil

Fatty Acids
Lard Oils
Neatsfoot Oil
Oleo Stearine
Stearic Acid
White Olein

Tallow
Grease
Lanolin
Caustic Soda
Soda Ash
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(As of April 24, 1939)

## Essential Oils

| | | | |
|---|---|---|---|
| Almond, Bitter, U.S.P. | lb. | $2.25 | $2.30 |
| Bitter, F. F. P. A. | lb. | 2.40 | 2.45 |
| Sweet, cans | lb. | .57 | .58 |
| Anise, cans, U.S.P. | lb. | .70 | .75 |
| Bay tins | lb. | 1.20 | 1.25 |
| Bergamot, coppers | lb. | 3.65 | 3.85 |
| Artificial | lb. | 1.25 | 1.30 |
| Birch Tar, rect. tins | lb. | .60 | .65 |
| Crude, tins | lb. | .15 | .18 |
| Bois de Rose, Brazilian | lb. | 1.55 | 1.60 |
| Cayenne | lb. | 1.50 | 1.75 |
| Cade, cans | lb. | .41 | .44 |
| Cajeput, native, tins | lb. | .50 | .52 |
| Calamus, tins | lb. | 5.50 | 6.00 |
| Camphor, Sassy, drums | lb. | .27 | Nom. |
| White, drums | lb. | .27 | Nom. |
| Cananga, native, tins | lb. | 1.25 | 1.30 |
| Rectified, tins | lb. | 1.80 | 1.85 |
| Caraway Seed | lb. | 1.75 | 1.80 |
| Cassia, Redistilled, U.S.P. | lb. | .95 | 1.00 |
| Cedar Leaf, tins | lb. | .60 | .62 |
| Cedar Wood, light, drums | lb. | .28 | .30 |
| Citronella, Ceylon, drums | lb. | .31 | .32 |
| Citronella, Ceylon, drums | lb. | .34 | .37 |
| Clove, U.S.P., tins | lb. | .98 | — |
| Eucalyptus, Austl., U.S.P., cans | lb. | .34 | .35 |
| Fennel, U.S.P., tins | lb. | 1.05 | 1.10 |
| Geranium, African, cans | lb. | 2.70 | 3.50 |
| Bourbon, tins | lb. | 2.65 | 2.85 |
| Turkish | lb. | 2.00 | 2.25 |
| Hemlock, tins | lb. | .65 | .70 |
| Lavender, U.S.P., cans | lb. | 2.00 | 4.75 |
| Spike, Spanish, cans | lb. | 1.05 | 1.10 |
| Lemon, Ital., U.S.P. | lb. | 2.50 | 3.00 |
| Cal. | lb. | 2.15 | — |
| Lemongrass, native, cans | lb. | .38 | .40 |
| Linaloe, Mex., cases | lb. | 1.25 | 1.30 |
| Nutmeg, U.S.P., tins | lb. | 1.12 | 1.15 |
| Orange, Sweet, W. Ind., tins | lb. | 1.70 | 1.75 |
| Italian cop | lb. | 2.00 | 3.00 |
| Distilled | lb. | — | .50 |
| California | lb. | — | .90 |
| Origanum, cans, tech | lb. | .90 | 1.00 |
| Patchouli | lb. | 3.35 | 6.50 |
| Pennyroyal, dom. | lb. | 2.10 | 2.15 |
| Imported | lb. | 1.75 | 1.90 |
| Peppermint, nat., cans | lb. | 2.30 | 2.55 |
| Redis., U.S.P., cans | lb. | 2.55 | 2.80 |
| Petitgrain, S. A., tins | lb. | .80 | .85 |
| Pine Needle, Siberian | lb. | .95 | 1.00 |
| Rosemary, Spanish, tins | lb. | .56 | .75 |
| drums | lb. | .51 | .70 |
| Sandalwood, E. Ind., U.S.P. | lb. | 4.75 | 4.80 |
| Sassafras, U.S.P. | lb. | .90 | 1.00 |
| Artificial, drums | lb. | .36 | .37 |
| Spearmint, U.S.P. | lb. | 1.70 | 1.75 |
| Thyme, red, U.S.P. | lb. | .85 | 1.25 |
| White, U.S.P. | lb. | .85 | 1.45 |
| Vetivert, Bourbon | lb. | 3.50 | 15.00 |
| Ylang Ylang, Bourbon | lb. | 2.50 | 3.00 |

## Aromatic Chemicals

| | | | |
|---|---|---|---|
| Acetophenone, C. P. | lb. | $1.30 | $1.45 |
| Amyl Cinnamic Aldehyde | lb. | 2.00 | 2.25 |
| Anethol | lb. | 1.00 | 1.05 |
| Benzaldehyde, tech. | lb. | .60 | .70 |
| U. S. P. | lb. | .85 | .95 |
| Benzyl, Acetate | lb. | .44 | .49 |
| Alcohol | lb. | .63 | .68 |
| Citral | lb. | 1.10 | 3.10 |
| Citronellal | lb. | .75 | .80 |
| Citronellol | lb. | 1.60 | 1.85 |
| Citronellyl Acetate | lb. | 4.50 | 7.00 |
| Coumarin | lb. | 2.75 | 4.65 |
| Cymene, drums | gal. | .90 | 1.25 |
| Diphenyl oxide | lb. | .50 | .55 |
| Eucalyptol, U.S.P. | lb. | .55 | .57 |
| Eugenol, U.S.P. | lb. | 1.70 | 2.15 |
| Geraniol, Domestic | lb. | .67 | 3.00 |
| Imported | lb. | 2.00 | 3.00 |
| Geranyl Acetate | lb. | 1.20 | 2.50 |
| Heliotropin | lb. | 1.80 | 2.20 |
| Hydroxycitronellal | lb. | 2.00 | 2.50 |
| Indol, C. P. | oz. | 2.00 | 2.13 |
| Ionone | lb. | 1.30 | 4.05 |
| Iso-Eugenol | lb. | 3.00 | 4.25 |
| Linalool | lb. | 2.10 | 6.30 |
| Linalyl Acetate | lb. | 1.35 | 2.25 |
| Menthol | lb. | 3.00 | 3.35 |
| Methyl Acetophenone | lb. | 2.50 | 3.00 |
| Anthranilate | lb. | 2.10 | 2.30 |
| Paracresol | lb. | 4.50 | 6.00 |
| Salicylate, U.S.P. | lb. | .35 | .37 |
| Musk Ambrette | lb. | 3.25 | 3.65 |
| Ketone | lb. | 3.40 | 3.80 |
| Xylene | lb. | 1.00 | 1.25 |
| Phenylactaldehyde | lb. | 2.10 | 3.50 |
| Phenylacetic Acid | lb. | 1.75 | 3.00 |
| Phenylethyl Alcohol | lb. | 2.50 | 3.35 |
| Rhodinol | lb. | 5.55 | 10.80 |
| Safrol | lb. | .50 | .53 |
| Terpineol, C. P., 1000 lb. drs. | lb. | .23 | .24 |
| Cans | lb. | .25 | .30 |
| Terpinyl Acetate, 25 lb. cans | lb. | .77 | 1.00 |
| Thymol, U.S.P. | lb. | 1.40 | 1.45 |
| Vanillin, U.S.P. | lb. | 2.10 | 2.35 |
| Yara Yara | lb. | 1.25 | 1.56 |

## Insecticide Materials

| | | | |
|---|---|---|---|
| Insect Powder, bbls. | lb. | .30 | .31 |
| Concentrated Extract | | | |
| 5 to 1 | gal. | 1.60 | 1.70 |
| 20 to 1 | gal. | 6.25 | 6.35 |
| 30 to 1 | gal. | 9.20 | 9.35 |
| Derris, powder—4% | lb. | .18 | .28 |
| Derris, powder—5% | lb. | .24 | .34 |
| Cube, powder—4% | lb. | .20 | .24 |
| Cube, powder—5% | lb. | .24 | .28 |

## Gums

| | | | |
|---|---|---|---|
| Arabic, Amb. Sts. | lb. | .10½ | .11 |
| White, powdered | lb. | .13 | .14 |
| Karaya, powdered No. 1 | lb. | .14 | .23 |
| Tragacanth, Aleppo, No. 1 | lb. | 2.25 | 2.35 |
| Flake | lb. | .50 | 1.00 |

## Waxes

| | | | |
|---|---|---|---|
| Bees, white | lb. | .37 | .39 |
| African, bgs. | lb. | .19 | .20 |
| Refined, yel. | lb. | .25½ | .26 |
| Candelilla, bgs. | lb. | .15¼ | .15¾ |
| Carnauba, No. 1 | lb. | .37¼ | .38 |
| No. 2, N. C. | lb. | .34¾ | .35 |
| No. 3, Chalky | lb. | .27½ | .28 |
| Ceresin, yellow | lb. | .08½ | .11½ |
| Paraffin ref. 125-130 | lb. | .039 | .040 |

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# Production Section

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries.*

# Fatty Acid Distillation

FATTY acid distillation is conveniently carried out in a high vacuum-condensation plant. The assumption is made that the crude fatty acids used to start with consist of at least 93-95 per cent of free acids. This is necessary in order to obtain a good yield and leave as small an amount as possible of distillation residue. The crude fatty acids are first dried in an aluminum drier fitted with an automatic stirrer. The maximum temperature should be 130-140°C. During the drying process water and some odorous constituents are driven off. When foam ceases to form on the surface of the fatty acids, drying is discontinued and the mass run off into a stock reservoir. Meanwhile the hot water system and vacuum pump are made ready.

At the beginning, the distillation temperature is gradually brought to 100°C. during a period of 1-2 hours. The preheater is warmed up and the dried fatty acids sucked through it into the still. Stills are made in part from copper and in part from acid-resistant steel. The vacuum must record an absolute pressure of 5-10 mm. of mercury in order to make possible good uniform distillation. The author succeeded in obtaining a pressure of 3-4 mm. of mercury under favorable circumstances. The temperature is quickly brought to about 160°C. and the steam for distillation started. The final temperature should be regulated to meet the requirements of the particular kind of oil which has been used,—as an average it runs about 200-230°C. It is advisable to keep the distillation temperature as low as possible consistent with the composition of the mixed fatty acids, in order to obtain a light-colored distillate. In terms of results it is better to lengthen the time than to increase the temptrature unnecessarily.

The darker fatty-acid fraction is separated and added to the crude fatty-acid stock for re-distillation. The lighter fatty acids go to a storage tank of aluminum equipped with a steam coil. The fatty-acid condensers and fractionaters are warmed up, two condensers being run at different temperatures, one at 60-70° C., the other at 45-50° C. These temperatures are regulated by means of cooling water, which is preferably softened water such as Permutit-treated water. Crude fatty acids are drawn in continuously during the distillation. It is of course necessary to preheat these to 160-170° C. in order not to cool down the mixture in the still. Volatile fatty acids which pass completely through the condensing system can be condensed by cooling with brine.

When the distillate is no longer light but turns yellowish, the distillation of the pitch begins. This is the point at which the greatest care should be taken. The yellow fatty acids are called second runnings. They are rich in oleic acid and can be added to the next charge or used in making paste soaps and as soft fats for dark soaps.

The temperature of the still can now be slowly increased, the maximum again depending on the nature of the fatty acids present, usually up to about 330° C. The stirrer is then started so that the material can be worked away from the bottom. Second runnings are naturally somewhat scanty. A pitch sample should be taken often. The pitch sample should be hard and short when cooled. When rubbed between two fingers it should no longer feel fatty. The residue varies in nature with the source of the fatty acids, for example, soybean-oil fatty acids give a soft pitch, coconut-oil and palm-oil fatty acids hard pitch, and fish-oil fatty acids a hard but somewhat short pitch. Fish-oil fatty acids are the most difficult to distil because the pitch solidifies and can only be removed by being scraped out. Such residue is termed gum pitch. When the pitch is in the right condition, the heat on the still is turned off and the pitch run off to storage at 90-100° C. It is then treated in accordance with the temperature at which it remains liquid, which usually varies from 35° to 100° C. The apparatus is thoroughly steamed out before a new batch is run through. F. A. *Seifensieder-Ztg.* **66,** 93 (1939).

## Sweating of Soaps

Studies of the sweating of soaps lead to the conclusion that it arises from two different causes. These are first, unfavorable external conditions under which the soap is stored, and second, improper preparation of the soap particularly as to the choice of ingredients. In the first case the sweating of the soap is brought about by excess moisture in the air. Since soap is hygroscopic, all soaps will show this phenomenon if stored for a long enough period at sufficiently high humidity, as in the wet season in the tropics. Sweating then consists of condensation of water droplets on the surface of the soap. It is a superficial condition which does not materially alter the composition of the soap.

In the second type of sweating, liquid soap extrudes and appears in drops on the surface of the solid soap. Examination of such drops shows that they often consist of strongly unsaturated fatty acid soaps plus a certain amount of unsaponifiable constituents or unsaponified fats. This separation of liquid soap on the surface occurs during drying when the soap cake shrinks to a certain degree. In this case a permanent change occurs in the surface portions of the soap, which leads in most cases to the rapid development of rancidity. The cause can be traced to a poor selection of fats, such as too great a content of cottonseed oil, rape seed oil or oxydized oils.

A special case of sweating can sometimes be traced to an excessive content of electrolytes in the soap. Small drops of salt solution may form on the surface. When the water evaporates from these, incrustrations of salt appear as a white coating. F. Wittka. *Allgemeine Oel- und Fett-Ztg.* **36,** 14-17 (1939).

## Methyl Cellulose in Soap

Methyl cellulose as an addition to soap makes the lather smoother and softer but should not be added in too great amounts to toilet soap. It is particularly suitable in superfatted soaps and medicinal soaps such as sulfur soaps, as it aids colloidal dispersion and reduces the risk of cracking in the latter case. Incorporation of methyl cellulose is very simple, from 10 to 20 per cent of a viscous solution made by dissolving 1 part of methyl cellulose in 15 parts of boiling water is crutched into the soap. The amount to be used depends on the type of soap being processed. Paul I. Smith. *Am. Perfumer* **38,** No. 3, 45-6 (1939).

## Fat Spoilage

Samples of fats and oils were kept for some four months in (1) the sun with access of air, (2) in a damp place in the light at —5 to 10° C. and (3) in a dark place at 5° C. Peroxides were detected by the potassium iodine method of Gangl and Rumpel; aldehydes by the Kreis phloroglucinol-HCl method; methyl ketone by Täufel and Thaler salicylaldehyde method, and acidity by the Köttstorfer method. Fats and oils decompose the fastest under the influence of light, air and heat. Their spoilage is of three kinds: (a) in the direction of ketones or aldehydes, (b) increase in acidity, (c) polymerization. In fats containing saturated acids the decomposition is toward ketones; in oils containing unsaturated acids the decomposition is toward aldehydes. The increase in acidity in materials kept under the conditions described is very slow. The spoilage of a fat may proceed along one or along several paths. Good, grade 1 fats give no color reactions with the above tests. Grade 2 materials give only faint tinges of color. Spoiled fats give strong color reactions. K. Sporzynska. *Przemysl Chem.* **22,** 3-8; through Chem. Abs.

## Preserving Oils

Vegetable and essential oils, fats and other materials that contain or consist of unsaturated organic compounds are preserved against deterioration by oxidation by the incorporation of moderately roasted cacao bean or moderately roasted cacao-bean shell so as to enable the material to absorb antioxidants therefrom. Alternatively, roasted bean or shell is extracted with water at 60-90° C. to secure the antioxidant material. This extract is then used in the substance to be preserved. Preliminary defatting extraction of the bean or shell with petroleum ether or with carbon tetrachloride is desirable. British Assoc. of Research for Cocoa, Chocolate, Sugar, Confectionery and Jam Trades, Thomas Macara, Wm. J. Stainsby and L. E. Campbell. British Patent No. 492,714.

## Fatty Oil Definitions

In the United States and Canada the following terms have come to be recognized by the vegetable oil industry. By *crude oil* is designated the oils and fats as they are extracted from the seeds, either by pressing or by solvent extraction. Such oils are settled or filtered to remove the greater part of the water, dirt, seed particles, etc., before going to the refinery.

*Refined oil* is crude oil which has been treated with caustic soda solution, resulting in the removal of the free fatty acids, part of the coloring matter and practically all of the albuminous or mucilaginous material originally present.

*Foots* or *soapstock* is the residue remaining in the refining tank after the refined oil has been pumped off and consists of a mixture of soap, neutral oil, albuminous material and coloring matter.

*Hydrogenated oil* is an oil bleached by treatment with absorbent clay or activated carbon, then treated with hydrogen in the presence of a catalyst to raise the melting point. The degree of saturation determines the increase in the hardness of the fat. *Canadian Chemistry & Process Industries* **23,** 123 (1939).

## Lecithin in Soap

In the manufacture of therapeutic or cosmetic soap containing lecithin, the latter is mixed with a small proportion such as 10-15 per cent, of cyclohexanol or a cyclohexyl ester, and the mixture is incorporated into the soap, preferably during milling. Ges. Für Fett-und Ol-Raffination. German Patent No. 666,208.

## Toilet Soap Lay-Out

In planning the lay-out of a toilet soap department the main object is to ensure swift passage of the flakes from one operation to the next, so that the soap never gets cold until the tablet has been stamped. A suitable arrangement for a department with a production of about 1,000 gross weekly of finished tablets is as follows: At the end of which the flakes enter, two mills are placed side by side, with sufficient space around them for a bin to pass. A short distance from the back of the mills, and as near the center as possible, is situated the plodder, so that it is in a position to take soap as it is finished, from either mill. To the left of the plodder is a line of stampers extending in a direction opposite to that of the mills.

Across the room from the stampers are the trimming and packing benches, and all waste passes back to the mills. By this arrangement all of the soap enters at the mill end in the form of raw material for the pans, and leaves at the other end ready for transport. *Manufacturing Perfumer* **4,** 88-9 (1939).

## Rancidity and Antioxidants

Rancidity is believed to result from attack on unsaturated linkages, with the development of highly reactive and unstable peroxides. On further oxidation the molecule is split with the production of volatile aldehydes and acids. The use of antioxidants is well known although their mode of operation is not entirely understood. One theory assumes that the antioxidant is itself oxidized by the active peroxide formed, which is by this means reduced. Another theory assumes that a molecule of oxygen combines with a molecule of fatty substance with the liberation of energy, which is passed on from molecule to molecule down the chain. The ultimate length of chain effected will depend on the efficiency of this transfer and the absence of substances which might impede or inhibit it. On colliding with an antioxidant, it is assumed that the energy fails to be passed on.

A comparison of results by the Kreis, methylene blue, iodine thiosulfate and organoleptic tests showed no very definite relation among the different methods of testing for rancidity. The Kreis test shows the presence of epihydrin aldehyde but does not necessarily prove rancidity, as crude vegetable oils may give the test but fail to give it after refinement. The methylene blue test also shows the presence of aldehydes, which reduce the dye to its colorless leuco base. Iodometric methods determine the amount of peroxide oxygen present, the liberated iodine being titrated with standard sodium thiosulfate solution.

Of a number of antioxidants used in laboratory experiments over a period of 3 months, *alpha*-naphthylamine, hydroquinone and gum guaic were found satisfactory; *alpha*-naphthol also possesses antioxidant powers, but *beta*-naphthol is very poor for such purposes. Some antioxidants lose their activity in contact with water. Water-soluble antioxidants include glycerine, tartaric acid, lactic acid, citric acid, and pyrophosphoric acid. Ralph G. Harry. *Manufacturing Perfumer* **4,** 82-5 (1939).

**Soap Plant Trouble**

**Trouble shooting in the soap plant . . . toilet soap with whiskers and how it was given a shave and a haircut . . . a story of looking for trouble in the soap plant . . . and finding it . . . as told anonymously by an old-timer in the soap industry in the next issue of SOAP & SANITARY CHEMICALS. Don't miss it!**

## Textile Agent

A product forming an aqueous solution with good capillary activity is prepared by methylating *mu*-heptadecylbenzimidazole by heating in a closed vessel to 140-180° C. with methyl chloride and sulfonating the reaction product. Soc. pour l'ind. chim. a Bale. Swiss Patent No. 196,533. through Chem. Abs.

## Fatty Acids from Paraffin

Paraffin was synthesized by the Fischer-Tropsch process, oxidized in the presence of water, the water removed and the neutral oil separated from the soap solution. After the fatty acids were liberated with acid, they were steam distilled, neutralized and the lactones extracted with petroleum ether. The purified mixed fatty acids were liberated and found to have an average molecular weight of 229.8, iodine number 4.9, hydroxyl number 3.7, and solidifying point 26.2° C. The largest fatty-acid fraction was myristic acid (16 per cent), while acids above $C_{17}$ amounted to 13.3 per cent. E. Jantzen, W. Rheinheimer and W. Asche. *Fette und Seifen* **45,** 388-93, 613-15.

## Metal Containers for Soap

The most suitable and cheapest metal to use in containers for making low-cost paste soap is iron. Aluminum is too readily damaged by alkalies and copper should not be used because alkalies in the presence of air cause green spots to be formed by reaction on the copper, which are very difficult to clean off. A non-rusting special steel is therefore the best answer. It should be cleaned frequently, when "alabaster" soaps can be made in it without offering difficulties. *Seifensieder-Ztg.* **66,** 80 (1939).

## Alkali Sub-silicate

A technically anhydrous sodium metasilicate is prepared by mixing together a subdivided anhydrous sub-silicate having a ratio of $Na_2O$ to $SiO_2$ of about 1.25-1.5 : 1, and sodium waterglass. The reactants are present in such proportions that the ratio of $Na_2O$ to $SiO_2$ in the mixture corresponds to that of metasilicate. The mixture is allowed to react and heated to form the anhydrous product. Pennsylvania Salt Manufacturing Co. Canadian Patent No. 380,391.

# Products and Processes

## Synthetic Fatty Acid Soaps

Hydrocarbons were produced by the reaction of carbon monoxide from coal or lignite with hydrogen in the presence of a catalyst. These hydrocarbons were oxidized by air to fatty acids consisting mainly of $C_{10}$-$C_{22}$ chains. The acids were purified by boiling to remove the lower fatty acids and then were saponified to soaps or esterified to fats. The soaps produced were similar to soaps from natural fatty acids in surface tension, viscosity, foam-producing properties, gold number, turbidity formation and detergent properties. A. Imhausen. *Kolloid-Z.* **85,** 234-46.

## Liquid Rosin Soap

In making liquid rosin soap, the rosin may be of the order of 20-25 per cent of the fat charge. Rosin itself consists largely of organic acids, abietic primarily, which have properties more or less similar to those of the fatty acids commonly present in soap, increasing detergency, softening the soap and making it more resistant to hard water and sea water. The following charges are suitable for making liquid rosin soap:

| | Per Cent |
|---|---|
| 1. Coconut oil | 45 |
| White tallow | 30 |
| Clear rosin | 25 |
| 2. Palmnut oil | 50 |
| Bleached palm oil | 25 |
| Rosin | 25 |

The color of rosin soap is yellow to brown, depending on the quality of the ingredients used. Henri Blin. *Les Matieres Grasses* **31,** 31-2 (1939).

## Tall-oil Soaps

In making soaps from tall oil it is necessary to consider the composition of the latter, which contains in 100 kg. about 50 kg. of fatty acids, 40 kg. of rosin acids and up to 10 kg. of unsaponifiable matter having the nature of mineral oil. If there is no objection to the original odor of tall oil, paste soap can be made from it alone, the content of rosin acids naturally yielding a very soft product. On this account it is considered advisable to use tall oil admixed with a cheap hard fatty acid. For the saponification of 100 kg. of tall oil, 34-35 kg. of 50 per cent caustic potash solution are necessary. No addition of potash or soda ash is made because of the original high content of unsaponifiable matter.

Tall-oil soap should be as near neutrality as possible because of its sensitivity to electrolytes. Bar soap may be made from the following: 40 per cent of distilled tall oil, 20 of coconut-oil or palm kernel-oil fatty acids, 25 of tallow acids and 15 per cent of hardened train-oil fatty acids. Salve-like soaps with good lathering properties may be made from 50 parts of distilled tall oil, 20 of bone-fat fatty acids and 30 parts of coconut-oil fatty acids, with a yield of 240-250 per cent. With this fat charge the addition of potash should not exceed one per cent of the amount of fat. *Seifensieder-Ztg.* **66,** 135 (1939).

## Hard-Water Soap Flakes

Soaps suitable for hard water in the form of flakes, threads, parings, puffed granules, powder etc. for the purpose of giving rapid solution, are obtained by mixing sodium soaps of fatty acids having two or more ethylenic groups, with a proportion of alkali orthophosphate that, as anhydrous salt, is 0.1-0.25 of the fatty acids. The soap acids may be mixtures of the above acids with monoethylenic acids to which relatively small proportions of saturated fatty acids and rosin may be added. The products may also contain sodium chloride, sodium sulfate, sodium borate, neutral sodium silicate or other agent not adversely affecting their properties. In examples (1) soap is prepared from a mixture of 95-90 per cent of oleic acid with 5-10 per cent of linoleic acid; (2) soap powder is prepared from a mixture of 7.5 per cent of trisodium phosphate, 12 hydrate, 7.5 of disodium phosphate, 12 hydrate, 12.5 per cent of anhydrous sodium borate, 12.5 of neutral sodium silicate, and 60 per cent of sodium soap with an 85 per cent fatty acid content obtained by saponifying the fatty acids from a 3:1 mixture of peanut oil and coconut oil. Lever Brothers & Unilever Lt., Richard Thomas and Henry B. Oakley. British Patent No. 492,719.

## Combination Soft Soap

The raw materials for a soft soap are 10 parts of rosin, 40 of linseed oil, 25 of coconut oil, 15 of peanut oil, 10 of castor oil, 50 of 50° Be. caustic potash, and 10 parts of 20° Be. potassium carbonate. First a rosin soap is prepared. Slow boiling and weak lye are essential. The temperature should be maintained at 70-90° C. for 5-6 hours. Caustic potash is then added and about two-thirds of the oil stock. Slow boiling is maintained for about 3 hours, when a uniform emulsion is formed. Water is then added from time to time and boiling continued for 2-3 hours. A 1:1 carbonate solution is added gradually up to 10 per cent of the quantity of oil. This keeps the mass thin and reduces the dullness and opacity of the soap. Samples of soap are tested with phenolphthalein and by tongue and extra alkali neutralized if necessary with coconut oil. After a few hours boiling, a thick scum forms on the surface, below which is a black mass of soap. Care should be taken to see that the scum does not mix with the soap.

A few drops of soap are removed on a clean dry glass plate and allowed to cool. These should be transparent without any fatty border. When the glass plate is tilted slowly, they remain stationary and do not flow. The soap is then tested and should be gummy and sticky when pressed and drawn between the thumb and forefinger. It is allowed to cool and matured for 8-10 days, when a transparent soap of vaseline-like con-

sistency is obtained. The color of the soap is brownish yellow. This type of soap is very popular in India and is different from the fig jelly and automobile soaps known in Europe. A. N. Ghose and V. S. Gandhye. *Indian Soap J.* **5,** 186-8 (1939).

♦

### Soapless Shampoo

Aerosol OT is a new soapless shampoo base. The material is an ester of a sulfonated dicarboxylic acid. It resembles white paraffin wax in appearance but is more plastic, and is marketed in pellets. A shampoo formula incorporating this ingredient is as follows:

| | Per Cent |
|---|---|
| Aerosol OT, 100% | 16. |
| Cetyl alcohol | 5. |
| White mineral oil | 5. |
| Denatured alcohol | 20. |
| Distilled water | 53.25 |
| Lecithin | 0.75 |

The new ingredient is said to have marked wetting, emulsifying and detergent properties. *Manufacturing Perfumer* **4,** 92 (1939).

♦

### Shampoo for Blond Hair

A shampoo for blond hair having a mild bleaching action may be made by mixing equal parts of powdered soap and sodium bicarbonate with 5 to 10 per cent of sodium perborate, based on the amount of soap powder present. The whole should be very thoroughly mixed and pains should be taken to store it under dry conditions protected as far as possible from moisture. Otherwise the perborate will gradually decompose, losing its bleaching effect. *Seifensieder-Ztg.* **66,** 97-8 (1939).

♦

### Fatty Acid Sulfates

Fatty acid and naphthenic acid sulfates may be prepared by treating the corresponding alcohols with sulfuric acid in the presence of a solvent, as described in German Patent No. 661,883 of Henkel & Cie. As an example, 210 parts of alcohol corresponding to the fatty acid from coconut oil are dissolved in 660 parts of carbon tetrachloride and mixed with 196 parts of 100 per cent sulfuric acid at 15° C., with stirring. The mixture is at first limpid but becomes turbid after some time, when it is warmed to 40-50° C. It separates into two layers. The lower layer, which represents about 89 parts, is drawn off. It consists of about 85 per cent sulfuric acid. The upper layer is freed of carbon tetrachloride by vacuum treatment. The sulfonated or rather sulfated product is neutralized with caustic soda. After drying, the product contains about 91 per cent of neutralized sulfated compound. This is a relatively pure product with no great contamination with sodium sulfate. *Les Matieres Grasses* **31,** 4-5 (1939).

♦

### Sulfonated Products

Products useful as wetting, cleansing, emulsifying and foaming agents are obtained by condensing an organic compound of high molecular weight containing an alcoholic hydroxyl group, with a poly-sulfonic acid of an aliphatic aldehyde or ketone, with or without the presence of a dehydrating agent. Böhme Fettchemie-Ges. m.b.H. German Patent No. 665,237.

♦

### Sulfonated Detergents

Extracts obtained from mineral oils by means of a solvent for the various olefins and aromatic compounds contained therein, are sulfonated in the presence of liquid sulfur dioxide. Products are obtained suitable for use as detergents, wetting agents, emulsifiers, foam producers or flotation agents. The liquid used for obtaining the oil extract may be liquid sulfur dioxide, if desired mixed with benzene, phenol, nitrobenzene or furfural. The extract may be sulfonated by means of oleum at low temperatures. Colgate Palmolive Peet Co. French Patent No. 831,100.

♦

### Alkyl Sulfates

Alkyl sulfates are prepared by bringing an aliphatic alcohol having a chain of 8-25 carbon atoms into contact with concentrated chlorosulfonic acid at a reaction temperature below 0° C. Standard Oil Development Co. Canadian Patent No. 380,241.

### Liquid Benzine Soap

A liquid soap containing benzine may be prepared by the semi-boiled process by saponifying 40 parts of distilled olein and 15 parts of tall oil with 20 parts of 50° Be. caustic potash until a sample of the soap mass will dissolve completely in water giving a clear solution. To this are then added 20 parts of methylhexalin, 50 parts of heavy benzine and 30-40 parts of water, which are well stirred in. *Seifensieder-Ztg.* **66,** 134 (1939).

♦

### Nickel-copper Catalysts

In the hardening of oil at lower pressures with nickel-copper catalysts, the unreduced catalyst is more active than the reduced catalyst. A catalyst composed of equal parts of nickel and copper is more active than that of one part nickel and three parts copper. From an economical and industrial standpoint a pressure between five and ten atmospheres is preferable. Sei-iti Ueno, G. Inagaki and H. Kisaki. *J. Soc. Chem. Ind. Japan* **41,** Suppl. binding 298-9; through Chem. Abs.

♦

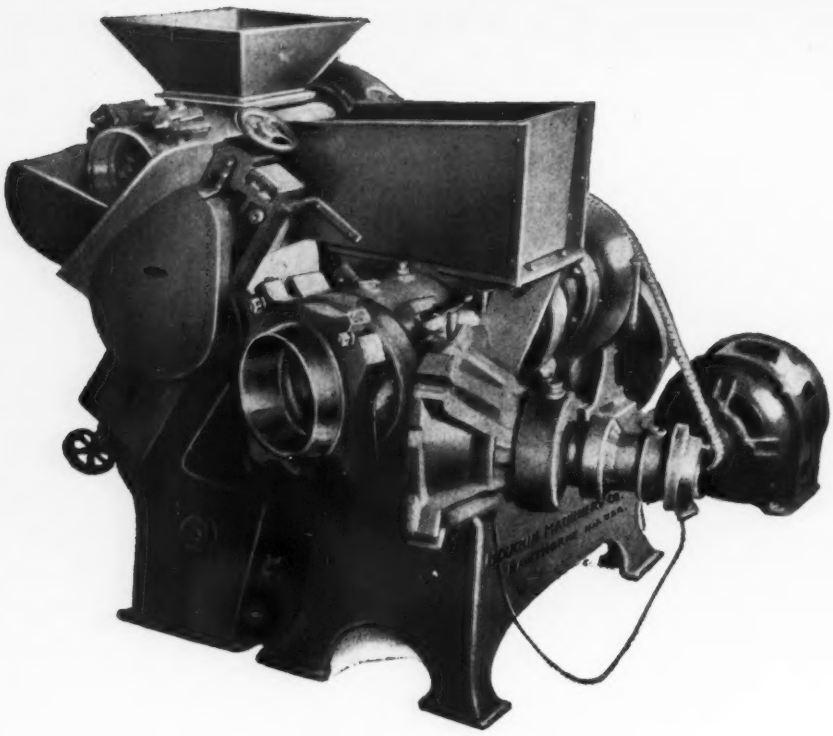
### Cleaner for Raw Wool

Esters of phenol and fatty acids containing at least 10 carbon atoms are treated with an amount of a sulfonating agent sufficient to introduce 1 to 2 sulfonic groups into the phenolic component. The resulting sulfonic acid is treated with lime or otherwise neutralized. A small amount of chloride or oxychloride of phosphorus or of sulfurous oxychloride is added before, during or after the sulfonation. A washing agent for raw wool is obtained in this way. Oranienburger chemische Fabrik A.-G. German Patent No. 666,626.

♦

### Change in Oleins

The drop in the iodine number of fats during storage is related to the absorption of oxygen which causes rancidity development. Metals such as iron which are dissolved when fats are stored in metal tanks, catalyze the reaction. Jules Clavel. Teintex **3,** 521-2; through Chem. Abs.



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# New Equipment

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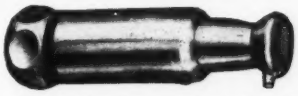
### 564—New Bobrick Dispenser

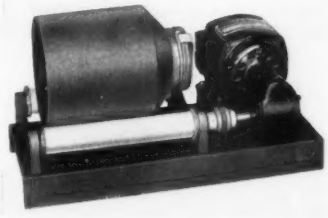
Bobrick Manufacturing Corp., New York, is now in production on a new line of lather dispensers. The



No. 861 wall type gravity valve is an entirely new streamlined design. The spout is on the end of the piston and delivers soap in the palm of the hand which operates the valve. The body and piston are made from heavily plated bronze, and the soap dispensing mechanism in this type dispenser is identical in construction to the Bobrick and Watrous gravity valves which the company has been manufacturing. It is said that all parts that come into contact with the soap are made from stainless steel, and through the piston is a stainless steel cable which works back and forth with each stroke, cleaning out any accumulated dried lather. Another feature is said to be the elimination of all projections, which makes cleaning easier.

### 565—Roller Jar Mill

United States Stoneware Co., New York, is in production on a new "Roller-Type" Jar Mill. Standard sizes are aranged to accommodate one, two, three or four "Loxeal"



jars, either of the 1, 1½ or 2 gal. size. Features of the "mill" are said to be rugged construction, rollers mounted in brass-bushed bearings and the elimination of clamping into frames or housings. The outside dimensions of the one-jar size are 13" wide by 25" long. Each extra jar adds about 17" to the length.

### 566—Counting Equipment

Lipman Engineering Co., Pittsburgh, has recently developed the PC-3 High Speed Photo Electric Counting Equipment, capable of 600 counts per minute or 36,000 counts per hour. It is supplied complete with photo electric amplifier and contact relay unit, light source with adjustable bracket, power supply control box, and counter in four or six digit models. Polarized plugs are used for connections, which the company says, permits service or replacement of a unit in several seconds. They estimate the tube life from 7,000 to 10,000 hours.

### 567—J. H. Day Screen Folder

J. H. Day Co., Cincinnati, has recently issued a bulletin describing in full its "Ro-Ball Stabilized Gyrating Screens" and containing six pages illustrating the various models. A full page table gives all information concerning dimensions, horsepower, shipping weight, ball cleaners, etc. Exclusive features of the screens are said to be a super-active cleaning device, rugged sieve frames, matched aluminum inspection ports and self-aligning tail-end bearings and drag-link with oilless rubber joints. Copies of the bulletin (No. 375) are available.

### 568—Foster D. Snell Booklet

Foster D. Snell, Inc., New York, has published a booklet outlining in brief form the functions of the consulting chemist and the chemical engineer. Illustrative examples are given to show methods of co-operation on different types of problems with industry, with attorneys and with individuals. Copies are available.

### 569—Folding Carton Booklet

Robert Gair Co., New York, has just published "Folding Carton Fashions" in which are illustrated and described over sixty different styles of folding cartons and display containers. The booklet, which was printed in part in the 1939 *Packaging Catalog*, is a handy reference for anyone interested in carton packaging. Copies are available.

### 570—New M. M. & R. Catalogue

Magnus, Mabee & Reynard, Inc., New York, have recently issued a new price list and catalogue which covers their complete line of products. In addition to the list of prices, the booklet gives suggested uses for various perfumes and flavors.

### 571—Safety Appliances

Mine Safety Appliances Co., Pittsburgh, has recently issued two bulletins describing the new M.S.A. Hydrocyanic Acid Gas Detector and the M.S.A. "GMK" Industrial Gas Mask which has been officially approved by the U. S. Bureau of Mines.

### 572—Glyco Chemical Booklet

Glyco Products Co., New York, has recently issued a catalogue covering the various products produced by the company. Suggested uses are given for each product in addition to physical properties. Formulae for the manufacture of different products are also suggested. The booklet includes several tables on the melting point of resins, melting points of common waxes, pH range of common indicators and pH values of acids and bases.

### Close Caustic Soda Plant

Joseph Crosfield & Sons, Ltd., soap and chemical manufacturers, Warrington, England, have recently closed down their caustic soda plant. They will, in the future, be supplied with stocks through Unilever, Ltd.

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6. **METSO 66.** Special Metasilicate cleaner for metals.

U. S. Pat. 1898707
U. S. Pat. 1948730

# New Patents

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**Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.**

**No. 2,150,759**, Insecticidal and Fungicidal Composition, Patented March 14, 1939 by Roscoe H. Carter, Washington, D. C., dedicated to the free use of the Public in the territory of the United States of America. The composition of an insecticide with a compatible fungicide, the composition comprising a cuprous xanthate as its essential active fungicidal ingredient and a lower di alkyl xanthogen as its essential active insecticidal ingredient, in the approximate molecular ratio of two to one respectively.

**No. 2,151,651**, Rotenone Compositions, Patented March 21, 1939 by Ludwig J. Christmann, Jersey City, and David W. Jayne, Jr., Elizabeth, N. J., assignors to American Cyanamid Company, New York, N. Y. Rotenone containing a stabilizer selected from a class consisting of aminophenols, dichloraniline, salicylic acid, and anthranilic acids.

**No. 2,152,003**, Insecticide and Fumigant, Patented March 28, 1939 by Adrianus Johannes van Peski and Johan Marius Hoeffelman, Amsterdam, Netherlands, assignors to Shell Development Company, San Francisco, Calif. An insecticide, fungicide and bactericide composition containing an effective amount of an epoxide of an unsaturated organic compound having more than one multiple bond.

**No. 2,152,047**, Preserving and Disinfecting Media, Patented March 28, 1939 by Hans Hahl, Ludwig Taub, and Friedrich Leuchs, Wuppertal-Elberfeld, Germany, assignors, by mesne assignments, to Alba Pharmaceutical Company, Inc., New York, N. Y. A preserving and disinfecting medium comprising as an active ingredient a non-acylated quaternary quinolinium halide containing at least one aliphatic radical of at least 6 carbon atoms combined with the quinoline ring system.

**No. 2,152,236**, Insecticide, Patented March 28, 1939 by Charles H. Batchelder, Hamden, Conn., dedicated to the free use of the Public. The process of making nicotine tannate in concentrated form consisting in reacting nicotine and tannin in an aqueous medium in the presence of a protective colloid.

**No. 2,152,520**, Washing and Cleansing Agents, Patented March 28, 1939 by Otto Lind, Dusseldorf, Germany, assignor to Henkel & Cie. G. m. b. H. Dusseldorf-Holthausen, Germany. In composition for bleaching, washing, cleansing and rinsing, the combination of substances consisting of one part of an oxygen-yielding compound, one to three parts of a water soluble salt of a phosphoric acid containing less molecularly combined water than orthophosphoric acid, and of from 1 to 3 parts of an alkali metal salt adapted to form an aqueous alkaline solution, the parts being by weight, the phosphoric acid salt being present in the proportion constituting not less than 20 per cent by weight of the mixture.

**No. 2,152,532**, Organic Bleaching Agent, Patented March 28, 1939 by Paul J. Carlisle, Niagara Falls, N. Y., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. A process of bleaching dark-color materials which comprises contacting the materials with tertiary butyl hypochlorite.

## Soap Builders

It is well known that soap plus builder is more effective in the laundry than soap alone. Much research has been carried out at Pennsylvania State College in the study of detergent efficiency. In connection with this work standard soiled cloth is prepared from which all traces if sizing are first removed by treatment with starch splitting enzymes, followed by sudsing and rinsing. Carbon black, vegetable fat and mineral oil are used as the soiling mixture. Stoddard Solvent is the soiling medium. The standard soiled cloth is prepared so that it has an initial light reflectancy of 32 ± 1.5 per cent.

Soiled samples of fabric so prepared were washed by a standard process and their breaking-strength losses determined. After 50 treatments in solutions of sodium metasilicate, trisodium phosphate and soda ash, covering a range of concentrations which might be encountered in any laundry procedure, it was found that the breaking strength losses for all three alkalies were negligible, being less than five per cent in every case.

The maximum soil-removal efficiency for the three alkalies when added to 0.1 per cent soap solution lay within the following limits of concentration:

| | *Lower limit* % | *Upper limit* % |
|---|---|---|
| Soda ash | 0.024 | 0.048 |
| Sodium metasilicate | 0.049 | 0.097 |
| Trisodium phosphate | 1.058 | 0.115 |

Converted to laundry terms the ratio of soap to builder becomes:

| | *Lower limit* *Parts soap* | *Parts alkali* | *Upper limit* *Parts soap* | *Parts alkali* |
|---|---|---|---|---|
| Soda ash | 3 | 1 | 2 | 1 |
| Sodium metasilicate | 2 | 1 | 2 | 1 |
| Trisodium phosphate | 2 | 1 | 1 | 1 |

Doubling the concentration of soap plus alkali only increased soil removal by four per cent, while reducing concentration of soap plus alkali to one-half, decreased soil removal by 34 per cent. This shows that there are practical limits in both directions. The same general ratios as given in the table were found to hold for stain removal as well as for soil removal.

In using bleach for stain removal, pH becomes very important. The optimum for a sodium hypochlorite bleach bath is pH 10.2-10.5. Below this the activity of the bleach is increased, causing undue losses in fabric strength, at the usual temperature of 140-160° F. Above 10.5 the sodium hypochlorite is stabilized to such an extent that good stain removal is not obtained. J. Fred Oesterling. *Am. Dyestuff Reporter* 27, P617-20 (1938).

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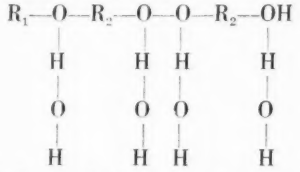
## Chemistry of the Igepals

As the Igepals are studied further, it becomes possible to explain their functional usefulness in terms of chemical structure. The Igepals are purely synthetic, not being built up from natural substances, as are the fat derivatives. They are therefore entirely different from other detergents and are not ionogenic. The general formula is represented as $R_1OR_2OR_2O-OR_2OH$, where $R_1$ is a hydrophobic, aliphatic straight or branched-chain hydrocarbon residue which functions like the hydrocarbon chain in the long-chain, soap-like detergents. $R_2$ represents short-chain units, usually $C_2H_4$, each connected with the rest by ether-oxygen bridges, except for the group at the end of the molecule, which is usually a hydroxyl group. The influence of this terminal hydroxyl group is not sufficient to make the long chain water-soluble. The solubility depends more on residual valencies which form new hydroxyl groups at the oxygen atoms. This takes place only in aqueous solution,



and the new hydroxyls are not really a part of the molecule, like the hydroxyl originally present. As a result there is a weak negative charge distributed at different points along the molecule, the effect at the interface resembling that produced by a soap-like colloidal electrolyte. The result is detergency, wetting power, etc.

Igepal C is especially suitable for use with vegetable fibers and the various synthetic fibers, acetate rayon being excepted, and Igepal W for woolens. Igepal C has easy solubility, practically unlimited resistance to metallic salts of any kind, which makes it useful for clearing prints in which metallic mordants have been used; it removes oils, solid fats, dirt and loosely adhering dyestuff. It also exerts a protective colloid action on the lime salts of ordinary soaps. Igepal W has similar properties and has a favorable action in wool processing, when combined with soap for milling; it prevents lime-soap formation and thus economizes in soap, besides assisting in clearing the fabric. Heron Wood. *Chem. Age* **40**, 59-60 (1939).

## Hardness and Soap Waste

A study of the properties of a number of soaps made from individual fats led to the following conclusions: The properties of a soap made from an individual fat are not appreciably changed from those of soap made from mixed fats. It is possible from a knowledge of the nature of the individual soaps to predict the properties of mixtures with a sufficient degree of accuracy to be practically useful. The higher the content of coconut or palm-kernel oil, the harder the soap will be. This will influence hardness much more than the content of solid fats such as tallow and palm oil.

Provided there is not a wide difference in solubility, the harder a soap is, the less wasteful it will be in cold water. High solubility in cold water is caused more by the presence of soaps of liquid fatty acids rather than by those of the coconut oil group. Wastefulness in hot water, on the other hand, unless the solubility is practically identical, is governed almost entirely by solubility, which with commonly occurring mixtures varies over a range sufficient to swamp any differences in hardness. High-titer, hardened whale oil soap (44° C.) was notably softer than the individual coconut and palm-kernel oil soaps, but showed less wastage in cold water than these soaps. In hot water, high-titer, hardened whale-oil soap is very durable, but in this case hardness is allied to low solubility. The rate of wastage of this soap, as well as of individual palm-oil soap and tallow soap, is nearly twice as great in water at 110° C. as at 100° C. This is related to solubility at the two temperatures and shows that there is great economy in using this type of soap in moderately hot water instead of very hot water. Archibald Rayner. *Soap, Perfumery & Cosmetics* **7**, 49-51 (1939).

## Stamm Rancidity Test

In the Stamm test for rancidity in fats, diphenylcarbazide is the reagent used. Diphenylcarbazide is very easily oxidized to diphenylcarbazone, which is colored red. Stamm believed that the presence in fats of free fatty acids, aldehydes and ketones brought about this reaction and the consequent development of the red color, and that such indication of the presence of these compounds indicated rancidity changes. Various media have been used for the reaction, with conflicting claims as to results, so that a study was undertaken of the effect of solvents as well as of a number of individual compounds on diphenylcarbazide. Glacial acetic acids, tetrachloroethane, benzyl alcohol, cyclohexanol, benzol, acetone, chloroform and vaseline gave no color with the reagent, but a pale red to dark red violet color with the reagent in the presence of rancid olive oil. If 1-2 drops of acetic acid are added to the other solvents, the color is greatly intensified. It apparently has a catalytic effect on the oxidative reaction.

Since only traces of the compounds mentioned may be present in rancid fats, the test was carried out with 1 cc. of a 0.2 per cent solution of diphenylcarbazide, and 1 drop of the material to be tested, with the exception of free fatty acids, of which 2-4 drops were taken. When rancid fats and oils were used, they were added in the same proportion as the individual compounds. The whole was heated to boiling over a free flame for 5-10 seconds, or for 3 minutes in a water bath.

Glycerides, aldehydes, ketones, fatty acids, hydroxy acids and hydrogen peroxide did not give a color when tested individually in the pure condition. When the compounds are old they evidently undergo deterioration, as they then give the red color. Ketones give the color if fatty acids are also present. Color development is also catalyzed by the presence of

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- Stock Sprays and Dips
- Theatre Sprays

# LOWEST COST MIXING

**WITH A "LIGHTNIN" MIXER EVERY TANK, KETTLE, CROCK, VAT, BARREL, OR OTHER CONTAINER IN YOUR PLANT BECOMES A POTENTIAL MIXING UNIT.**

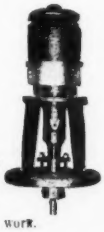
Portable, easily moved from one container to another and readily adjustable to any desired angle. All "LIGHTNIN" Mixers (except Variable Speed Models) may be obtained with any type motor to fit any current characteristics. Choice of Stainless Steel or Monel Shafts and Propellers. Adjustable length shafts—by means of tube and chuck—just like a carpenter's drill. Extended Bearing Support.

Sealed out-board bearing prevents oil or grease from this source running down shafts and contaminating mixture.

"LIGHTNIN" is the most complete line of propeller type mixers made. Capacities range from 1 to several hundreds of thousands of gallons. Portable, top-entering, side-entering types, both geared and direct drive. Explosion proof motor available for inflammable liquids.

*Send for Mixing Problem Work Sheet*

"LIGHTNIN" Portable-Mixers (geared and direct drive) range in size from 1/30 to 10 H.P.

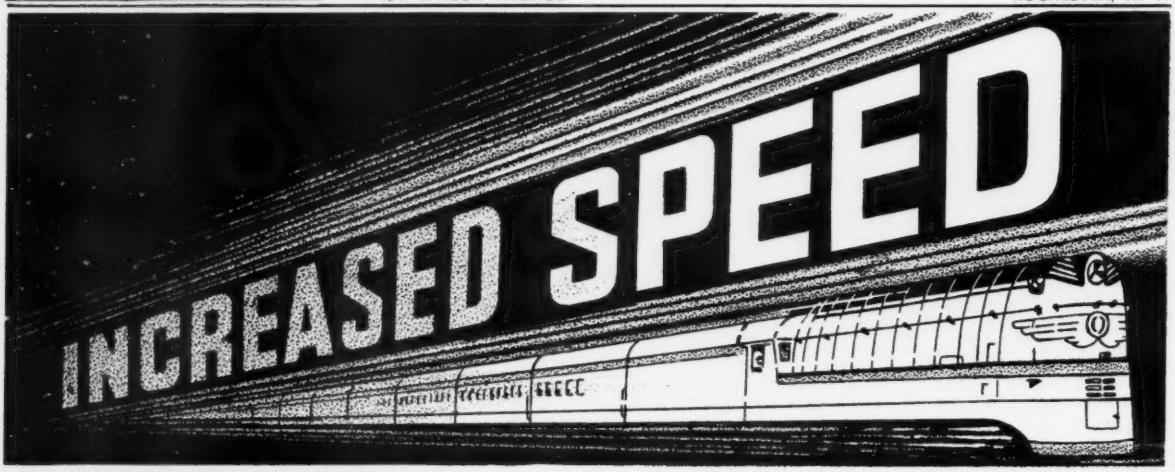


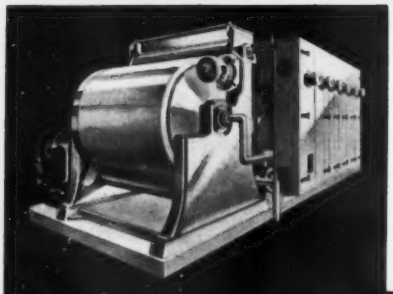
"LIGHTNIN" Top Entering Units (geared and direct drive) for open or closed tank work including pressure and vacuum work.

"LIGHTNIN" Side Entering Units for Tanks up to 1,000,000 gals.

## MIXING EQUIPMENT CO., Inc.

1051 GARSON AVENUE — ROCHESTER, N. Y.



In producing flakes for granulated soaps, toilet cakes or packaging, high speed output can often be an item of great saving. With the New Proctor Flake Soap System, from the hot liquid soap in the kettle or crutcher to the dried flakes requires only 6 to 14 minutes and capacities may be obtained from 750 to 6000 lbs. per hour, according to flake thickness, character of soap, etc. At this stepped-up production, quicker deliveries are assured and there are tremendous savings in floor space and equipment. Complete details are contained in a new 16-page illustrated catalog, that is yours for the asking.

**PROCTOR & SCHWARTZ · INC · PHILADELPHIA**

## NEW PROCTOR *Flake Soap* SYSTEM

traces of metal ions, unsaturated fatty acids and aldehydes. It is concluded that the diphenylcarbazide reaction can be applied as a qualitative test for rancidity, but not a quantitative test, as some workers have suggested. Experience with the method showed that it was necessary to test the solvents for purity by running a blank determination, before reaching a conclusion. E. Glimm, L. Kludzinske and H. Fleischhauer. *Fette und Seifen* **45,** 496-9 (1938).

## Fatty Acid Determination

Heat three grams of disintegrated soap and 60 cc. of water on a water bath until solution is complete. Cool, transfer to a 100 cc. volumetric flask with hot water, 96 per cent alcohol and finally with a mixture of water and alcohol. Fill the flask with hot water, mix and take out 20 cc. with a pipe washed out by hot water. Add this 20 cc. solution to a special cylinder fitted with a side arm. Add 2 drops of methyl orange and 25 per cent sulfuric acid to a strongly acid reaction, cool and add 40 cc. of ether. Shake the closed cylinder and add water, drop by drop, until the level of the lower fraction reaches the side arm. Repeat the extraction 4-5 times, draw off the ether solution through the side tube into a weighed container until only 2 mm. of ether solution remains in the cylinder. Treat the solution remaining in the cylinder twice with 15 cc. of ether and unite the ethereal solutions. Remove the ether and weigh the container. The result gives one-fifth of the fatty acids from 3 grams of soap. Odon Szakacs. *Kiserletugyi Kozlemenyek* **40,** 203-5; through Chem. Abs.

## Iodine Number

A modified technique developed by G. Scotti of Florence for determining the iodine number of a fat combines some of the characteristics of Hubl's method with others of Fij's method. A benzol solution of iodine is used, as this solvent has the advantage of making the elimination of alcohol and chloroform unnecessary, and of simplifying the reaction of the iodine with the unsaturated fatty acids. Iodine has no action on benzol in cold solution. The solution is rapidly and easily prepared and remains unchanged after long storage.

Mercuric acetate is used in place of mercuric chloride as catalyst, the acetate being dissolved in 98 per cent acetic acid to make a 10 per cent solution. The acetate attaches itself to unsaturated bonds more readily than the chloride. The reaction is first to block both positions of the double bond in unstable fashion with mercuric acetate. Two molecules of acetate are needed for each double bond, and addition of iodine causes the latter to replace the mercuric acetate, four atoms of iodine being required for each double bond. One of these four atoms fixes itself to the bond immediately, the two succeeding ones fix the two atoms of mercury, previously fixed to the bond, and the fourth atom of iodine then attaches itself to the bond. *Chemical Age* **39,** 429 (1938).

**New Soap Applications**

**The list of new applications for soaps of one kind and another, — some important, and others not, — continues to grow. A discussion of these new uses in leather, paper, insecticides, waterproofing and dustproofing, etc., by Paul I. Smith will be published in an early issue of SOAP & SANITARY CHEMICALS.**

## Whale Oil Variations

Oils obtained from whales caught at various times of the year and at widely different places show remarkably little variation in saturated acid content, the limits being 22-5 per cent for the humpback and blue whales and 18-21 per cent for the fin whale. The oil from whale blubber always contains several per cent less saturated acids than the oil from the bones or flesh. J. Lund. *Fette und Seifen* **45,** 290-2 (1938).

## Wijs Iodine Number

The result of many years of experience leads to the conclusion that the Wijs method is the most practical for determining the iodine number of marine fats. The method was subjected to critical examination to determine the best conditions for carrying out the procedure. Eleven kinds of oil were used to test the findings. The best solution for the determination proved to be a mixture of 45 per cent of glacial acetic acid and 55 per cent of carbon tetrachloride by volume. In such a solution the reaction time is 30 minutes and the time interval 165 minutes in case it is desired to get the iodine number within 0.3 unit. The excess halogen, under these conditions, can vary between 65 and 400 per cent. The modified procedure can be used for iodine numbers between 8 and 190 with satisfactory agreement with numbers obtained by the unmodified procedure.

The modified procedure is as follows: To the weighed sample (of a weight such that the halogen excess will lie between 65 and 400 per cent), add 25 cc. of 0.2 Normal iodine monochloride solution dissolved in a mixture of 45 per cent acetic acid and 55 per cent carbon tetrachloride by volume. After 30 minutes at about 20° C. add 10 cc. of 10 per cent potassium iodide solution and titrate excess iodine with 0.1 Normal sodium thiosulfate solution, in the usual manner. Alfred Vossgard and Ernst Bjorsvik. Z. anal. Chem. **115,** 195-204 (1939); through Chem. Abs.

## Peanut Oil Hydrogenation

In the catalytic hydrogenation of peanut oil under reduced pressure, the linoleic acid is changed to oleic acid when Raney nickel mounted on pumice is used as catalyst. The hydrogenation stops at this stage. This offers a practical method of removing the impurities or easily oxidizable constituents from the oil, which produce odor and rancidity. Rene Escourrou. Bull. soc. chim. [5]. **5,** 1184-1200 (1938); through Chem. Abs.

## Soap Texture

(*From Page 26*)

in texture to prevent them dissolving too rapidly on account of the large surface exposed to the action of the water, and at the same time should have good lathering properties. Hardness is achieved by using a good quality tallow as the main constituent of the stock, whilst the presence of coconut oil improves the lathering powers. Thorough saponification is essential. The large surface area exposed to the air makes floating soaps especially subject to rancidity trouble. For this reason the best procedure is probably to saponify the coconut oil and tallow separately, using an excess of lye, which is finally removed by graining out with brine, whereby a practically neutral soap is produced.

The air may be incorporated either by means of an Archimedian screw in the melted soap, operating in the reverse of the usual direction, or alternatively, by means of a series of paddles operating in opposite directions on a horizontal shaft. Rotation is commenced with the blades dipping lightly into a portion of the melted soap at first, and when a voluminous froth is formed more soap is added. The first froth then mixes with the rest and a homogeneous and well-aerated soap stock is obtained. The stock should be fairly dry and agitated in the crutcher at 170°180° F. until it is quite opaque and has about twice its original bulk.

Testing consists in determining whether the sample is sufficiently opaque. It should not feel too greasy or too slippery. Its floating properties are then gauged to determine whether the soap is satisfactory from this point of view. An experienced workman can generally tell when aeration is complete by watching the edges of the crutcher and the tendency of soap to solidify there when aeration is complete.

Framing is difficult with these soaps on account of the fact that the soap at the bottom of the crutcher is denser than that at the top. Quick cooling is also necessary, as the soap tends to sink in the middle of the frame leaving a high proportion of scrap. Drying is carried out in a cool well-ventilated room, since any degree of heat tends to crack the soap through expansion of the occluded air.

## Unloading Liquid Caustic

(*From Page 31*)

joints as possible be used in the unloading lines.

Valves. Lubricated cocks made of cast iron or steel are recommended in preference to valves. Ordinary plug cocks present a safety hazard unless specially designed for such service. Flanged type iron gate valves are satisfactory for use with caustic. Nickel bearing iron is more resistant to caustic than ordinary cast iron.

Gaskets. Asbestos-base gaskets are preferable to rubber, especially at high temperatures. Graphitized asbestos string packing is recommended.

Pumps. Single suction, non-air-binding type of centrifugal pump, with extra deep stuffing box recommended. Avoid extra-close coupling between pump and motor. It is advisable that pump be fabricated of nickel cast iron and be provided with facilities for easy draining and steaming, and that graphitized asbestos packing and a monel shaft be used.

### Delivery Lines

Provision should be made in all pipe line and pumps for easy draining or for blowing out the entire system with steam, followed by air. Lines, pumps, and tank car connections should be blown free of caustic before disconnection. Caustic liquor should never be permitted to remain in pipe lines. *Pipe of less than 2" diameter and abnormal length and height in discharge lines should be avoided.* As much as possible of the unloading line should run inside of heated buildings, and should have sufficient gradient so that it will be self-draining. It is advisable that the unloading line be jacketed so as to conserve heat. For the handling of the more concentrated grades of caustic, delivery lines should be accompanied by steam lines, the two being in close contact and wrapped together with suitable insulating material.

### Do Not Enter Empty Car

Under no circumstances should consignee attempt to enter car. Any internal washing should be done in accordance with shipper's instructions.

(Ed. Note: Copies of the complete manual may be obtained at ten cents each from the Manufacturing Chemists' Assn., 608 Woodward Bldg., Washington, D. C.)

## Soap Specifications

(*From Page 30*)

**E. Detail Requirements**

E-1a. The material shall conform to the following detail requirements:

| | *Maximum Per Cent* | *Minimum Per Cent* |
|---|---|---|
| Moisture and matter volatile at 105° C | 34.0 | |
| Sum of free alkali, total matter insoluble in alcohol, and sodium chloride | 2.0 | |
| Free alkali, calculated as sodium hydroxide (NaOH) | 0.1 | |
| Chloride, calculated as sodium chloride (NaCl) | 1.0 | |
| Matter insoluble in water | 0.2 | |
| Anhydrous soap | | 68.0 |
| Acid number of the mixed fatty acids prepared from the soap | | 212 |
| Rosin, sugar, and foreign matter | none | |

E-2. *Computation.* The percentage of moisture and volatile matter shall be computed, and reported by the testing laboratory, on the soap as received. The percentages of all other constituents shall be calculated and reported on an assumed moisture and volatile matter content of 28 per cent. For basis of purchase, see paragraph I-2.

**F. Methods of Sampling, Inspection, and Tests**

F-1. Deliveries will, in general, be sampled and tested according to the methods contained in Section F of Federal Specification P-S-536. However, the Government reserves the right to use any additional available information to ascertain whether the material ordered meets the specification.

**G. Packaging, Packing and Marking**

G-1. *Packaging.* Unless otherwise specified, commercial packages are acceptable under the specification.

G-2. *Packing.* Unless otherwise specified, the subject commodity shall be delivered in standard commercial containers, so constructed as to insure acceptance by common or other carriers, for safe transportation, at the lowest rate, to the point of delivery.

G-3. *Marking.* Unless otherwise specified, shipping containers shall be marked with the name of the material, and the quantity contained therein, as defined by the contract or order under which the shipment is made, the name of the contractor, and the number of the contract or order.

# Sanitary Products SECTION

A Section of "SOAP" dealing with

**Insecticides • Disinfectants • Moth Products**
**Floor Products • Polishes • Chemical Specialties**


## It's PYRIN— 4 to 1!

We are making four PYRIN shipments to one of straight Pyrethrum Extract.

Why? The answer is obvious:

1. PYRIN gives higher kill at lower cost.
2. PYRIN does the job on hard-to-kill insects.
3. PYRIN diluted 25 to 1 saves you fully 30%.
4. PYRIN is SAFE.

★ ★ ★ ★ ★

*Killing Power---that's the thing!*

**JOHN POWELL & CO., INC.**

114 EAST 32nd STREET NEW YORK, N. Y.

# Four ways to
# SELL YOUR INSECTICIDE

1. Rely on a pyrethrum concentrate of unvarying excellence, guaranteed to contain minimum 2.0 grams Pyrethrins per 100 c.c. or 2.5% by weight.

2. Use a *clarified* extract; avoid any possibility of cloudiness that may lead to staining. Physical appearance is also an important factor to consider.

3. Base your insecticide on a concentrate which contains more Pyrethrin I than Pyrethrin II, thereby increasing your kill well above the average.

4. Let R. J. PRENTISS & CO., INC. combine these for you in their CLARIFIED PYRETHRUM CONCENTRATE No. 20.

## R. J. PRENTISS & CO., INC.

**100 Gold Street** **New York City**

*Licensed Cube Distributors under Dennis Patent 18,667*

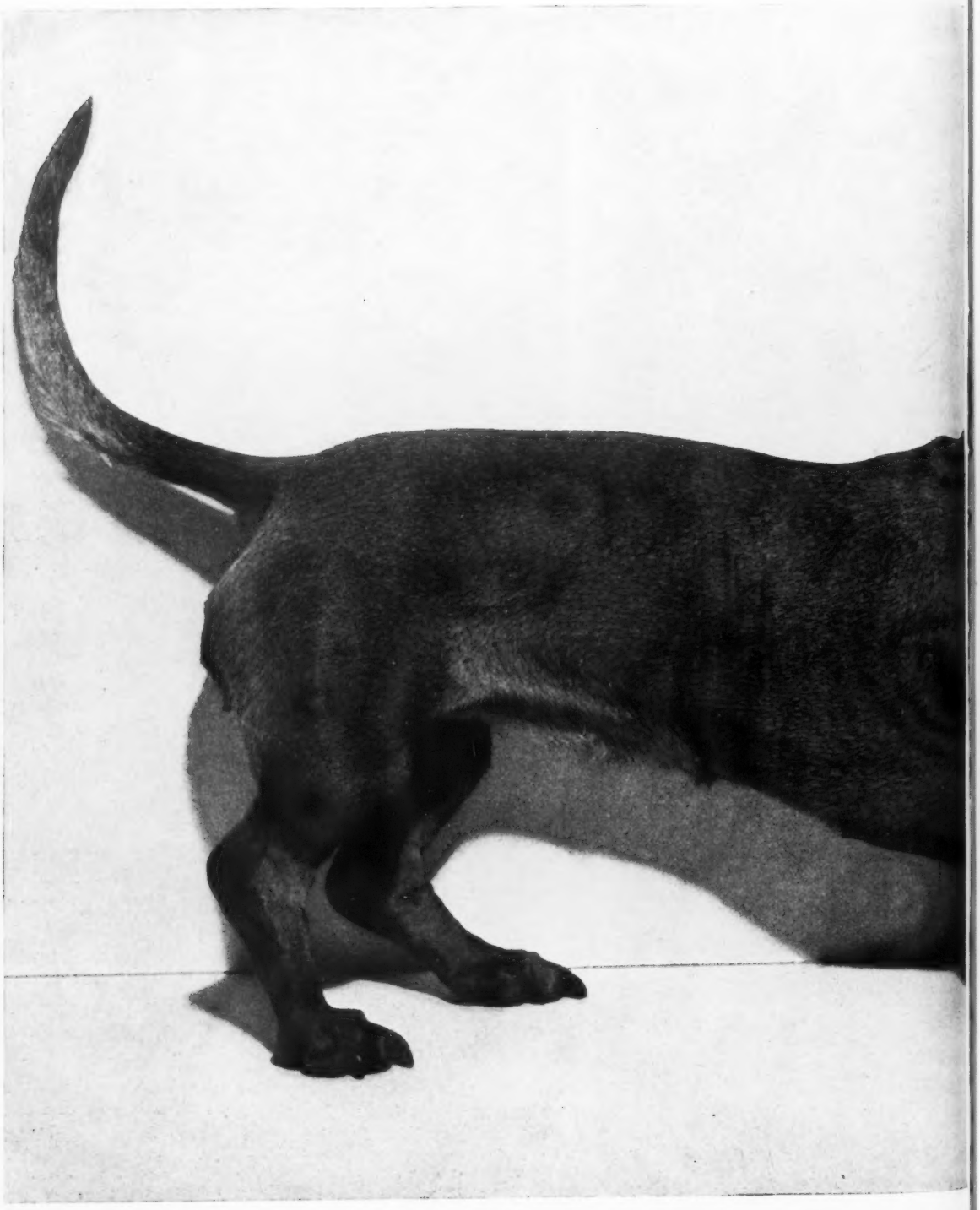
# WHY....

are van Ameringen-Haebler perfumes found in so many of the most successful household insecticides on the market today?

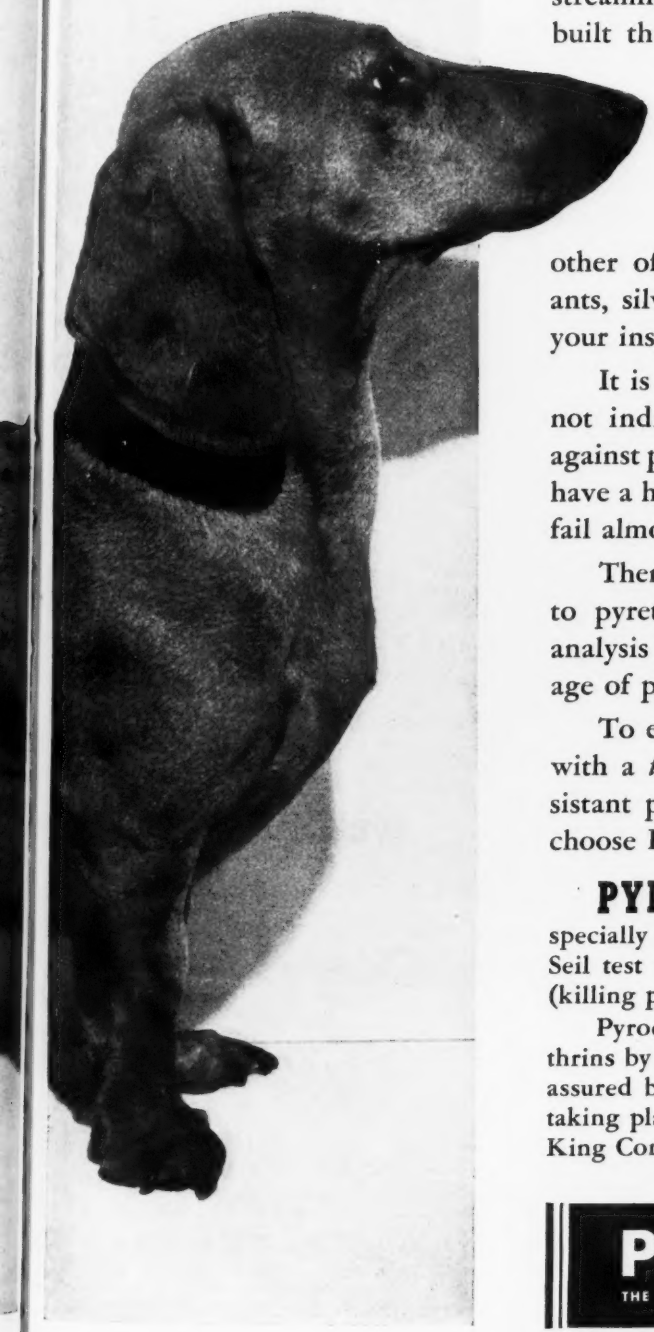
Because these perfumes are custom built, especially developed for the particular spray base in which they are used, scientifically created to be gone when the base odor is dissipated, leaving no kerosene smell, no perfumy pall. Successful manufacturers know the superior quality of van Ameringen-Haebler perfumes and these products help to make successful insecticides by making them more pleasant to use.

VAN AMERINGEN-HAEBLER, INC.
315 FOURTH AVE., NEW YORK CITY

# FOR BA



# R BADGERS ONLY!



Don't set Brunhilde on the trail of a deer. Her streamlined figure doesn't signify speed . . . she's built that way to follow badgers underground.

If, like Brunhilde, your insecticide is built to do a limited job . . . don't expect it to perform beyond its power. Perhaps the Peet-Grady test has shown that it will kill flies . . . but what about other offensive household pests such as roaches, ants, silver fish, moths, bed bugs . . . are you sure your insecticide is a match for them?

It is well known that the Peet-Grady test does not indicate the effectiveness of an insecticide against pests other than flies. Certain synthetics may have a high rating by the Peet-Grady test, yet may fail almost completely when used against roaches.

Then there are synthetics, which, when added to pyrethrum concentrates, cause a misleading analysis . . . the Seil test showing a higher percentage of pyrethrins than is actually present.

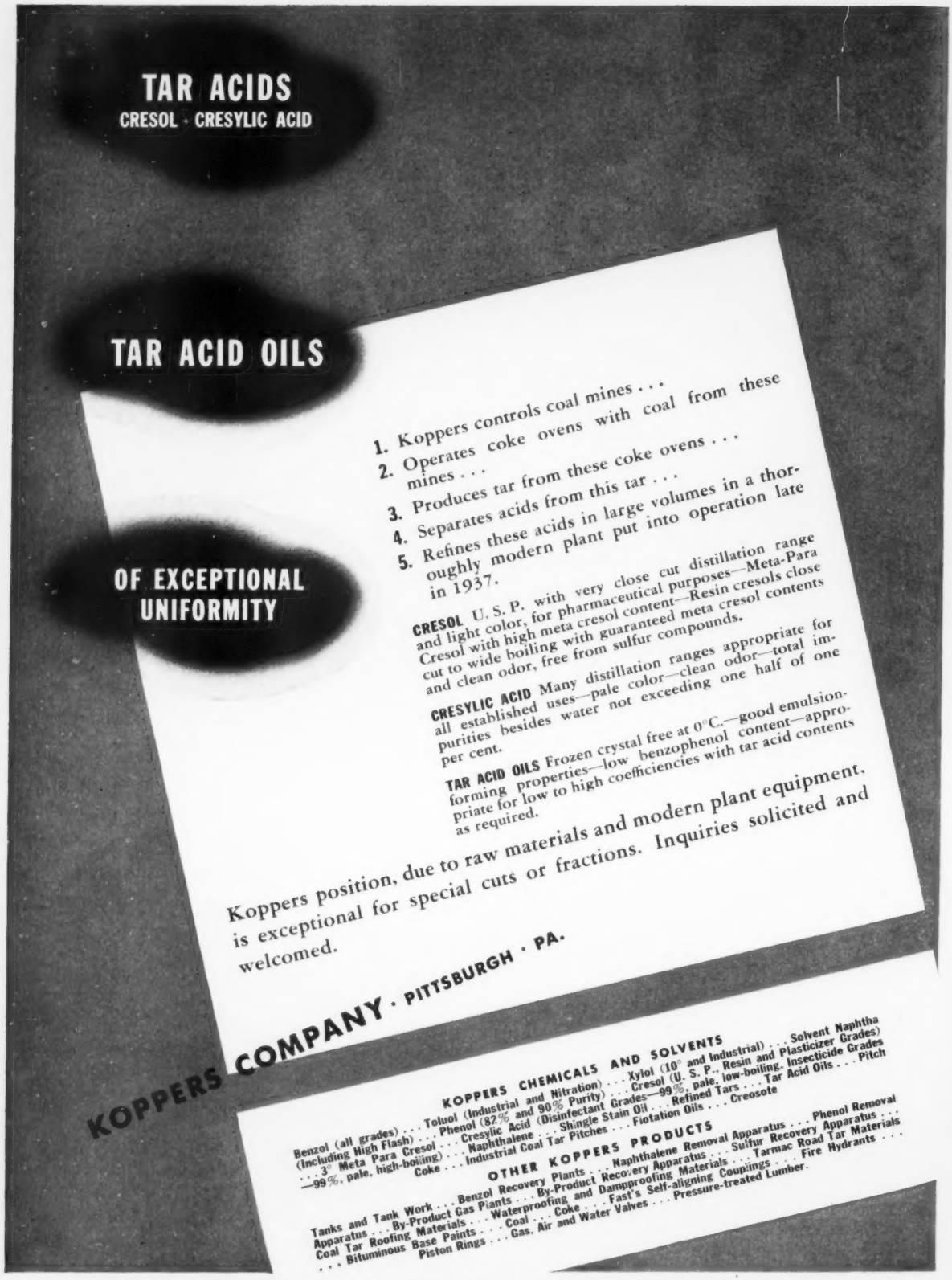
To escape these uncertainties, choose the base with a *ten-year record* of effectiveness against resistant pests, as well as flies and mosquitoes . . . choose Pyrocide 20.

**PYROCIDE 20** contains no synthetics: it is specially treated to remove "false" pyrethrins; thus the Seil test will show the actual amount of pyrethrins (killing power) present.

Pyrocide 20 is guaranteed to contain 2.5% pyrethrins by weight—2 grams per 100 c. c. Uniformity is assured by three analyses during manufacture, the last taking place just before shipment. McLaughlin Gormley King Company, Minneapolis, Minnesota.

**PYROCIDE 20**

THE PUREST FORM OF PYRETHRINS COMMERCIALLY AVAILABLE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CRESOL · CRESYLIC ACID
TAR ACID OILS
OF EXCEPTIONAL UNIFORMITY
1. Koppers controls coal mines . . .
2. Operates coke ovens with coal from these mines . . .
3. Produces tar from these coke ovens . . .
4. Separates acids from this tar . . .
5. Refines these acids in large volumes in a thoroughly modern plant put into operation late in 1937.
CRESOL U. S. P. with very close cut distillation range and light color, for pharmaceutical purposes—Meta-Para Cresol with high meta cresol content—Resin cresols close cut to wide boiling with guaranteed meta cresol contents and clean odor, free from sulfur compounds.
CRESYLIC ACID Many distillation ranges appropriate for all established uses—pale color—clean odor—total impurities besides water not exceeding one half of one per cent.
TAR ACID OILS Frozen crystal free at 0°C.—good emulsion-forming properties—low benzophenol content—appropriate for low to high coefficiencies with tar acid contents as required.
Koppers position, due to raw materials and modern plant equipment, is exceptional for special cuts or fractions. Inquiries solicited and welcomed.
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Benzol (all grades) . . . Toluol (Industrial and Nitration) . . . Xylol (10° and Industrial) . . . Solvent Naphtha (Including High Flash) . . . Phenol (82% and 90% Purity) . . . Cresol (U. S. P., Resin and Plasticizer Grades) . . . 3° Meta Para Cresol . . . Cresylic Acid (Disinfectant Grades—99%, pale, low-boiling, Insecticide Grades —99%, pale, high-boiling) . . . Naphthalene . . . Shingle Stain Oil . . . Refined Tars . . . Tar Acid Oils . . . Pitch Coke . . . Industrial Coal Tar Pitches . . . Flotation Oils . . . Creosote
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**PRODUCTS OF THE WHITE TAR COMPANY OF NEW JERSEY, INC., a Koppers Subsidiary**

**REFINED NAPHTHALENE—Crushed, Crystals, Powder, Lump, Chips, Flakes. For use in manufacture of deodorizing blocks, moth preventives and other insecticides. Also Naphthalene in Balls, Blocks, Tablets · COAL TAR DISINFECTANTS—Co-efficients 2 to 20 plus, F. D. A. Method · CRESOL AND CRESYLIC DISINFECTANTS · PINE OIL DISINFECTANTS · PINE OIL DEODORANTS · CRYSTAL AND BLOCK DEODORANTS · LIQUID INSECTICIDES · DEODORIZING BLOCKS—Pressed Naphthalene or Paradichlorobenzene. Various sizes and shapes. Perfumed and plain. Bulk industrial packages, retail packages. Write to Kearny, N. J.**

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# 3 NEW GIVAUDAN FLY SPRAY ODORS

To help the manufacturer meet the demand for perfumed fly sprays, Givaudan has developed these three new and highly effective aromatics:

**OZONE COMPOUND GD**
**MEADOW SWEET GD**
**NEW MOWN HAY GD**

All three may be used with excellent results in any type of spray using either Pyrethrum, or Pyrethrum substitutes as the toxic principle. Approximately ⅛ oz. per gallon gives very good coverage in ordinary kerosene; in deodorized kerosene even less is required. Givaudan invites manufacturers to write for samples, prices and further information on these important new odor developments.

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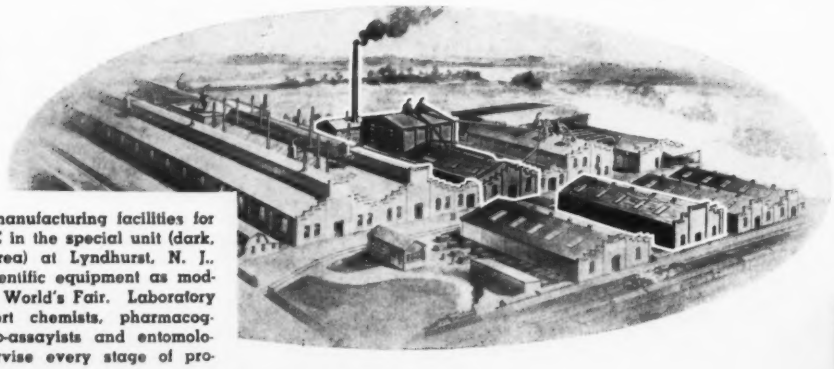
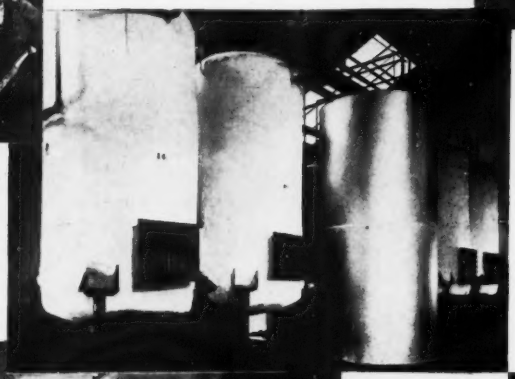
# Showing large scale pr

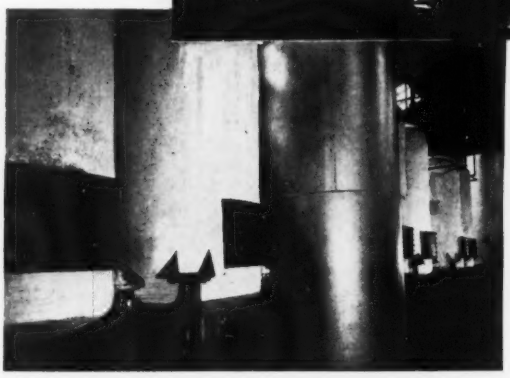


**The vast manufacturing facilities for PYREFUME in the special unit (dark, outlined area) at Lyndhurst, N. J., include scientific equipment as modern as the World's Fair. Laboratory men, expert chemists, pharmacognosists, bio-assayists and entomologists supervise every stage of production.**

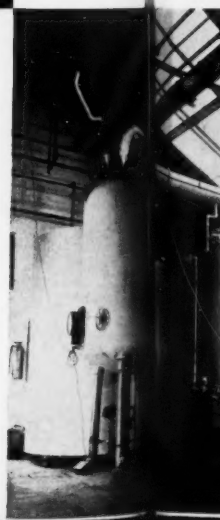
1 A view of whole Japanese pyrethrum flowers in machine-pressed bales as imported. Each bale weighs 448 lbs.—30 tons in this small pile.



4 Several batteries of percolators, insulated for temperature control, provide adequate capacity for continuous large scale production.



6 Still more percolators utilized in the extraction process — representing an important economy in the production of PYREFUME.



## S. B. PENICK & COMPANY

**132 NASSAU ST., NEW YORK, N. Y.** **1228 W. KINZIE ST., CHICAGO, ILL.**

**PYREFUME IS STANDARDIZED—GIANT**

# le production of . . .

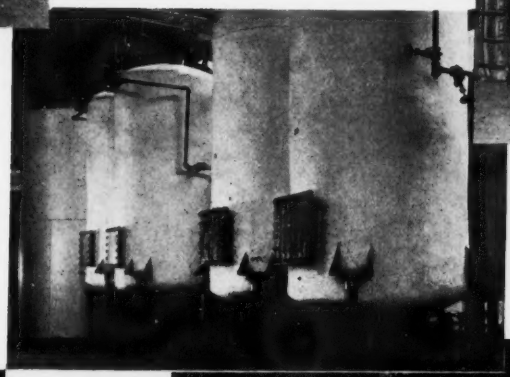
# PYREFUME

(THE PERFECTED PYRETHRUM CONCENTRATE)

## at the new PENICK plant in Lyndhurst, New Jersey

2 The quarter-bales are loaded on an endless chain conveyor feeding the milling plant—where they are granulated prior to percolation.

3 Samples are systematically drawn, before granulation, for preparatory assay of pyrethrins content; control assays continue through the entire process.

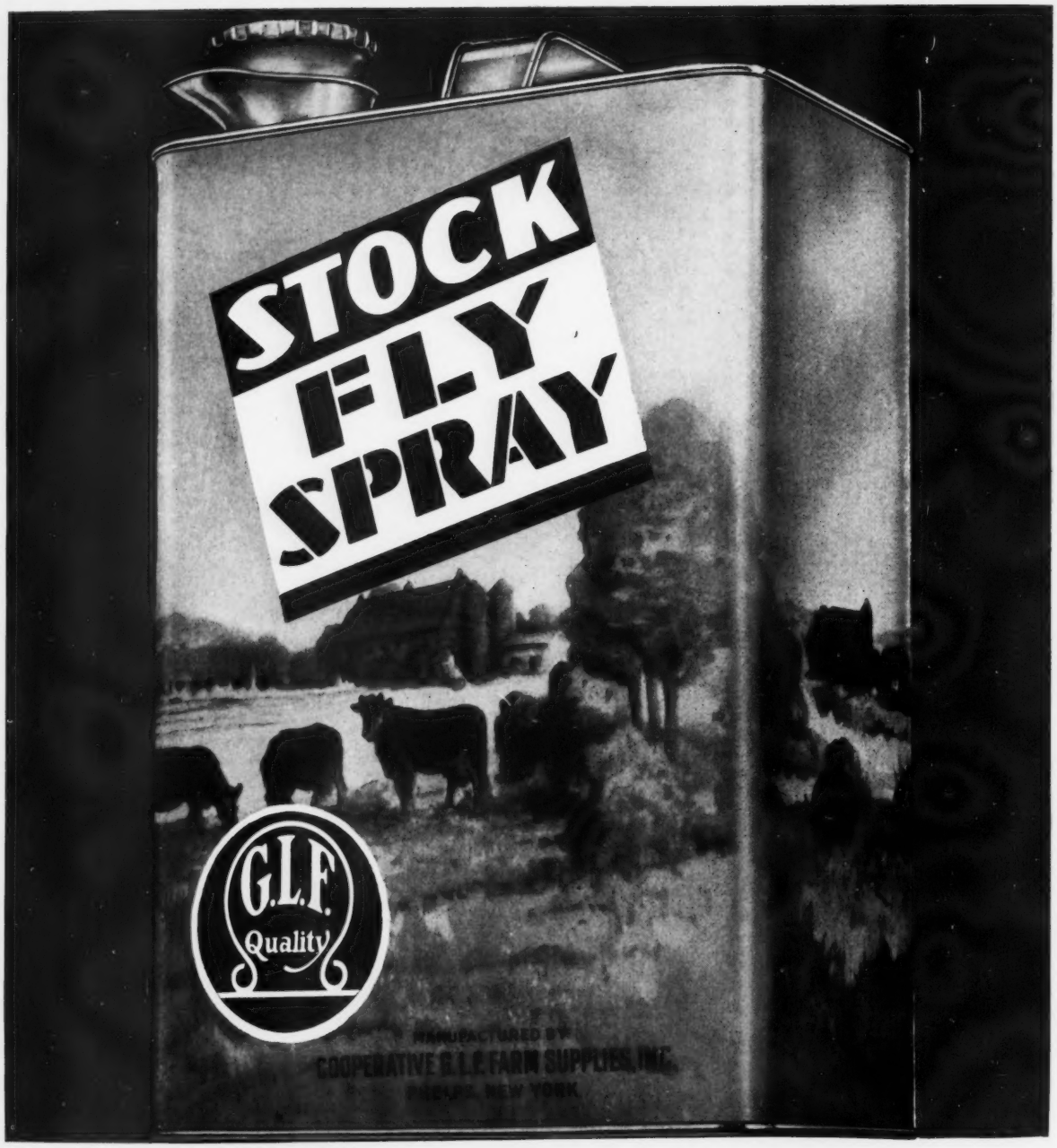


5 Additional percolators used in the manufacture of PYREFUME.—Another view of a battery connected in series to make one extraction unit.

8 Individual drums are filled from storage tanks with finished, tested PYREFUME—in regular and odorless base.

7 A large capacity still with condenser and storage tanks are illustrated in this view. Several additional tanks not shown here are used to store the solvents employed in the process of manufacturing PYREFUME.

**GUARANTEED IN PYRETHRINS CONTENT**



*Smart* CONTAINERS flash the VALUE signal that starts store talk . . . that SELLS merchandise!

"NATIONAL" strikes an *individual* note in Package design and color values. "NATIONAL" pledges *money's worth* in original ideas . . . in product expression.

*See What* **"NATIONAL"** *Suggests!*

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SUBSIDIARY OF McKEESPORT TIN PLATE CORPORATION

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# . . . for *Para Blocks* and crystals—

## DICHLOROMES NORDA

***for Paradichlorbenzene***

| *Series A* $1.00 | *Series B* $1.50 | *Series C* $2.00 |
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| Bouquet A | Bouquet B | Bouquet C |
| Lilac A | Lilac B | Lilac C |
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| Violet A | Violet B | Violet C |
| Sweet Pea A | Sweet Pea B | Sweet Pea C |
| Gardenia A | Gardenia B | Gardenia C |

★

## SECTOROMES NORDA

***for fly sprays***

Priced at 50c and $1.00 per pound

*Ask NORDA for further details.*

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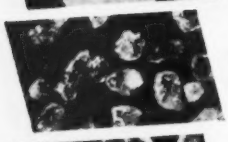
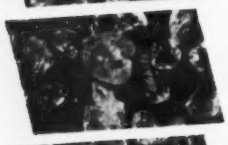
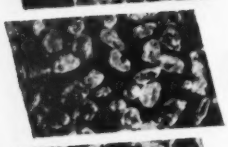
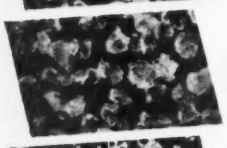
# A GOOD REASON FOR EVERY GRADE OF SOLVAY PARA-DICHLOROBENZENE

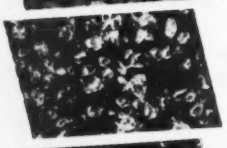
TRADE MARK REG. U. S. PAT. OFF.



. . . and that good reason is *your* own good reason for using one of these ten grades of Solvay Para-dichlorobenzene.

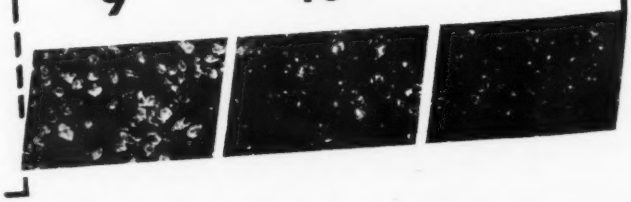
One of the grade sizes shown here is the *exact* size of Solvay Para-dichlorobenzene that you should be using in your blocking machine to avoid wastage . . . or in your transparent packaging to make the packages look better and speed up their sale.

The ten grades of Solvay Para-dichlorobenzene illustrated here are actual size photographs. Look them over carefully . . . perhaps by using No. 7 instead of No. 9 you will speed up your blocking operations. Or, perhaps, No. 1 or No 3 grade will enhance the looks of your packages. But whichever size will work best or look best, Solvay can supply it!

## YOU CHECK THE GRADE ... WE'LL DO THE REST

We will send you a sample of the grade you check off . . . send you complete information on Solvay Para-dichlorobenzene . . . or if you are uncertain of your requirements, our technical staff is ready to help you select the most efficient grades for your particular purposes. Try Solvay service! Fill in the coupon now!

9 10 11



| 1 | 2 | 3 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|

**SOLVAY SALES CORPORATION**
*Alkalies and Chemical Products Manufactured by The Solvay Process Company*
**40 RECTOR STREET** **NEW YORK, N. Y.**

*Gentlemen:* Please send me a sample of the grade of Solvay Para-dichlorobenzene I have checked off, along with complete information.

*Name* _____

*Company* _____

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# 1939 OFFICIAL TEST INSECTICIDE

THE 1939 Official Test Insecticide specified for evaluating liquid household fly sprays by the Peet-Grady Method according to the official procedure of the National Association of Insecticide & Disinfectant Manufacturers, is stocked for prompt shipment in single six-ounce bottles or in cartons of one dozen six-ounce bottles.

Send orders or requests for information direct to the Executive Office of the National Association of Insecticide & Disinfectant Manufacturers, 110 East 42nd St., New York. The official test insecticide is available to all firms or laboratories whether members of this Association or not.

▼

*National Association of*
*Insecticide & Disinfectant Manufacturers, Inc.*

110 East 42nd Street — New York

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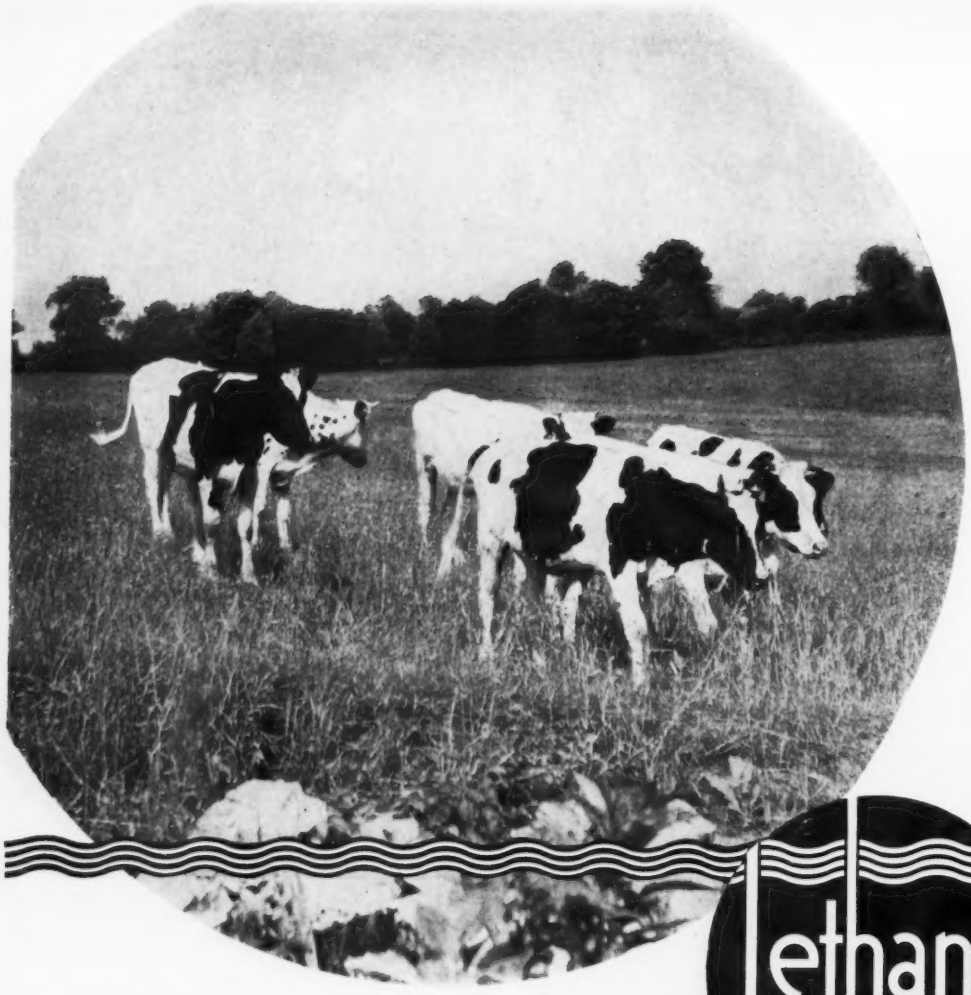

# A COMPLETE LIVESTOCK SPRAY

**Lethane 384**

*Synthetic Insecticide Concentrate*

## *at Low Cost . . . with One Concentrate*

Lethane 384 provides outstanding repellency, quick knock-down, and high kill without supplementary repellent or killing agents.

Use of Lethane 384 cuts toxic agent costs in half.

The large number of livestock sprays based solely on Lethane 384 proclaims it the outstanding concentrate for such products.

*Use Lethane 384 in Livestock Sprays*

*Use Lethane 384 Special in Household, Industrial and Pest Control Sprays*

**RÖHM & HAAS COMPANY, INCORPORATED**

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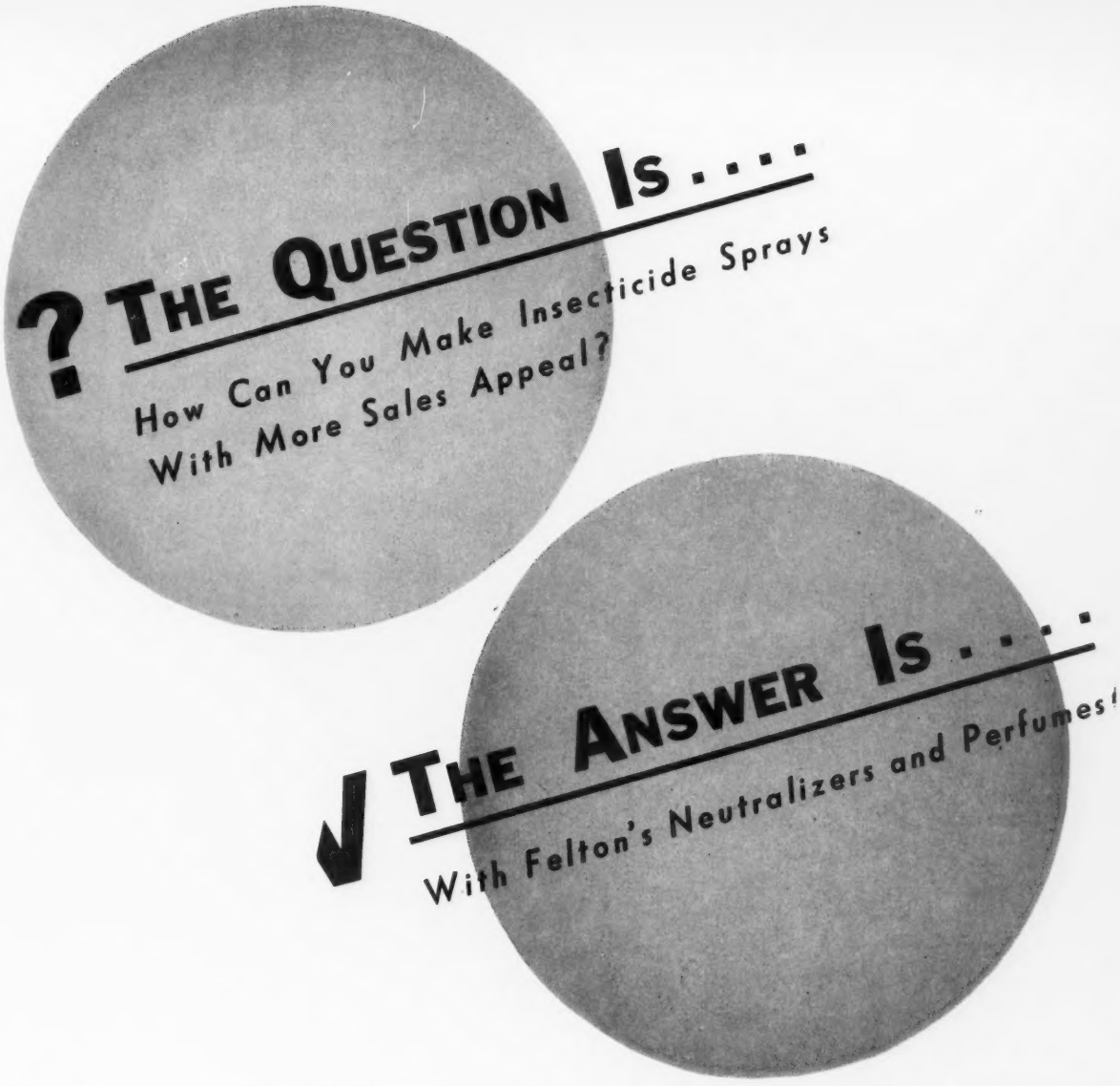
? THE QUESTION IS . . . .
How Can You Make Insecticide Sprays With More Sales Appeal?
✓ THE ANSWER IS . . . .
With Felton's Neutralizers and Perfumes!

It's a fact that correct neutralizing and perfuming are paramount factors in marketing successful Insecticide Sprays.

By using these excellent perfumes, developed by Felton Chemical Company, Inc. after years of research and actual market tests, you are sure of correctly neutralized and pleasantly perfumed sprays at an unusually economical cost.

IT COSTS YOU LESS THAN 2c PER GALLON WHEN YOU USE FELTON PERFUMES FOR INSECTICIDE SPRAYS.

**KEREX 11** — Excellent for Lethane Sprays

**KEREX BOUQUET** — A floral odor of proven merit

**KEREX L'ORIENT** — A sweet vanilla like fragrance

**KEREX V450** — A clean "outdoor" scent

*Send us a sample of your unperfumed spray so that our laboratory can recommend the most advantageous perfume.*

Boston, Mass. 80 Boylston St.
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# Headquarters *for* TESTING Information

## ~ *the new* 1939 BLUE BOOK

carries the most complete set of testing methods ever assembled, we believe, for insecticides, disinfectants and insecticidal raw materials. Included in ready reference form are the Peet-Grady Test for liquid household insecticides, The Seil Method for estimation of pyrethrins, the Gnadinger-Corl Method for evaluation of pyrethrum flowers, the Wilcoxon-Holaday Method for determination of Pyrethrin 1, The Jones Method for rotenone determination and the F.D.A. Method for testing disinfectants.

A limited number of copies of the new 1939 BLUE BOOK are still available to new subscribers.

***The New BLUE BOOK also includes***

**Buyers Guide** — Listing everything readers of SOAP buy,—raw materials, machinery, packaging materials, bulk soaps, sanitary products, accessories, etc., with a comprehensive list of leading suppliers of each item.

**Toilet Soap Manufacture** —A discussion of manufacturing problems.

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**Glass Cleaners** — Composition and use of windshield, window and glass cleaners.

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# NEUTRACENE

## *The Effective Deodorizer*

## FOR FLY SPRAY

**$1.25 Per Pound**

Use 1/16 ounce to one gallon of your spray to neutralize bad odor . . .

Then add ⅛ to ¼ ounce of any one of the following top bouquet odors . . .

**ODOCENE**
Reliable specialty of proven merit. Pleasant type odor of enduring character.
$2.50 PER POUND

**PETROMA**
Floral type, having a pleasing Wisteria background.
$2.50 PER POUND

**FLOCENE**
Floral type of attractive character but giving no definite flower impression.
$4.50 PER POUND

ORDER A TRIAL QUANTITY AND MAKE YOUR TESTS NOW!

**VITACENE**
Possesses a clean, refreshing scent. New modern odor. Remarkable coverage without leaving a definite perfume.
$2.50 PER POUND

**VANASPRA**
Produces the definite Vanila types of odor. Suitable for use in bakeries, confectioners, restaurants, etc.
$1.65 PER POUND

**FRUITSPRA**
This odor gives results in harmony with the odors around fruit and vegetable stores where perfume would not be desirable.
$4.50 PER POUND

# AROMATIC PRODUCTS, INC.

**15 East 30th Street, New York City — Factory: Springdale, Conn.**

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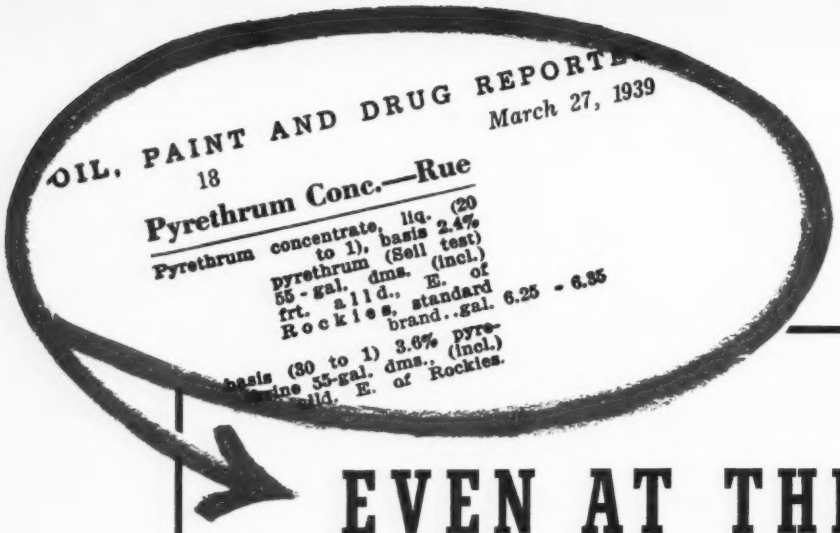
OIL, PAINT AND DRUG REPORTER
March 27, 1939
18
Pyrethrum Conc.—Rue
Pyrethrum concentrate, liq. (20 to 1), basis 2.4% pyrethrum (Sell test) 55-gal. dms. (incl.) frt. alld., E. of Rockies, standard brand..gal. 6.25 - 6.35
basis (30 to 1) 3.6% pyre- line 55-gal. dms., (incl.) alld. E. of Rockies.

# EVEN AT THIS PRICE

## You Can Maintain Your Pyrethrum Insecticide Volume with

# D.H.S. ACTIVATOR

Don't lower quality in your 1939 household fly sprays. Make your sprays better than ever before by reenforcing your pyrethrum extract with D. H. S. Activator.

**THE LOW COST WILL SURPRISE YOU.**

*For example, in making a Class B household fly spray, using 5% 20:1 pyrethrum at $6.00 a gallon, the toxic ingredient cost per gallon is 30¢.*

**By adding 5% D. H. S. Activator to replace 2½% pyrethrum, the toxic ingredient cost is only 22.6¢, and a better spray is obtained.**

Besides this big saving, D. H. S. Activator makes possible—

**HIGHER KILL.**
**MORE RAPID KILL.**
**MORE UNIFORM KILL.**

Save yourself some money—and keep up your pyrethrum insecticide volume. Write, wire, or phone for the complete D. H. S. Activator story.

*A little more than a year ago, D. H. S. Activator was made available commercially. To date it has been used in hundreds of thousands of gallons of household fly sprays. Many manufacturers are using it. Sales are rapidly increasing. Why not investigate?*

*HERCULES NAVAL STORES*

HERCULES POWDER COMPANY
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961 Market Street, Wilmington, Delaware

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QQ-72

# BULLETIN

**RE: EFFECTIVENESS OF MM&R KEROSPRAY PERFUMES WHEN USED IN INSECTICIDES EMPLOYING NEW**

**D. H. S. ACTIVATOR**

**MAGNUS, MABEE & REYNARD, INC.**

INTER-OFFICE MEMORANDUM

Subject: PERFUMING INSECTICIDES USING D. H. S. ACTIVATOR

Date: March 22, 1939
From: Mr. P. C. Magnus
To: Mr. A. H. Downey

Test all of our most widely used Kerospray Perfume Oils to determine their effectiveness for perfuming and deodorizing insecticides prepared with the new D.H.S. ACTIVATOR as recommended in manufacturer's bulletin.

The use of D.H.S. ACTIVATOR with one half the usual amount of pyrethrum extract the manufacturer claims, results in reducing the cost of the toxic agent and in "more uniform kill - higher kill - more rapid kill". D.H.S. ACTIVATOR will gain wide usage and we want to be ready to answer questions on perfuming. Report your findings as quickly as possible.

**MAGNUS, MABEE & REYNARD, INC.**

INTER-OFFICE MEMORANDUM

Subject: PERFUMING INSECTICIDES USING D. H. S. ACTIVATOR

Date: April 14, 1939
From: Mr. A. H. Downey
To: Mr. P. C. Magnus

The following MM&R Kerospray odors were introduced in the usual proportions of unperfumed insecticide of which the toxic ingredient was 2.5% 20:1 pyrethrum extract plus 5% D.H.S. ACTIVATOR, AS RECOMMENDED BY THE MANUFACTURER, Hercules Powder Co.

Perfume Oil Kerospray Sweetgrass
Perfume Oil Kerospray Chrysanthemum
Perfume Oil Kerospray Cinnamon
Neutralizer No. 202
Bouquet B.L.S. (Lilac)
Perfume Oil Kerospray Vanilla

THE RESULT: Highly satisfactory.

These perfumes effectively neutralized all kerosene and toxic ingredient odors and provided a delicate and well fixed fragrance.

The cost of perfuming with the above perfume oils remained as little as a half cent to the gallon of spray.

**MAGNUS, MABEE & REYNARD, INC.**

QUALITY ESSENTIAL OILS, BALSAMS AROMATIC CHEMICALS, ETC., SINCE 1895

**16 DESBROSSES ST. NEW YORK, N. Y.**

CHICAGO: 180 N. WACKER DRIVE . . . CANADA: RICHARDSON AGENCIES, LTD., 454 KING ST., W., TORONTO

THIS IS THE PICTURE THAT IS WORTH A THOUSAND WORDS

ABC

# to BUYERS OF ADVERTISING SPACE

IF you buy advertising space today, you have one tremendous advantage over advertisers of twenty-five years ago.

Before 1914, men would have given an eye-tooth for the vital information on circulation which you can have for the asking—in A.B.C. reports. These reports give complete, authoritative facts to guide your buying and to make your advertising more effective.

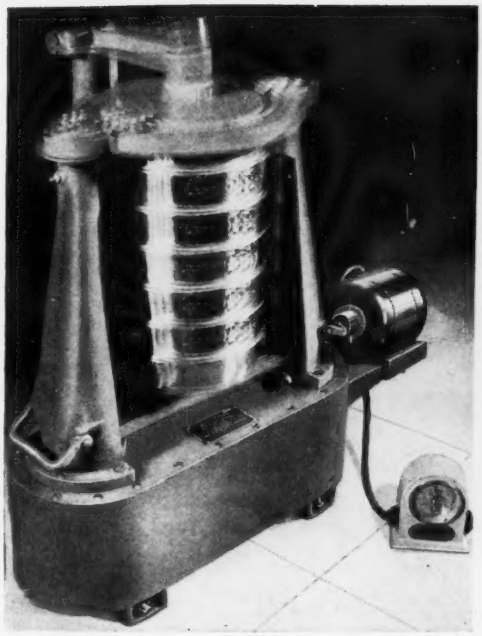
A.B.C. reports reveal and analyze NET PAID CIRCULATION—the true measure of advertising value. A.B.C. reports answer these three vital questions about circulation: how much is there? where is it? how was it obtained? The answers give verified information on *quantity*, and an important index on *quality* of circulation.

Don't fail to make use of this great advantage. Before you buy space in this or any other publication, get the A.B.C. report. Study it. Determine how the circulation meets your requirements. Then buy with the knowledge that you are buying wisely and effectively.

Our circulation is fully audited in our latest A.B.C. report. We are proud of this report and will be glad to give you a copy

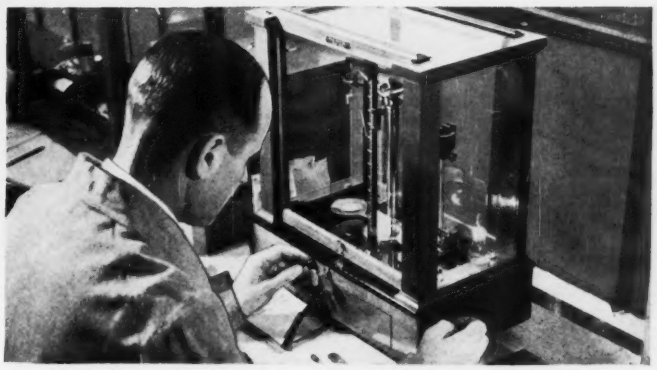
**SOAP and Sanitary Chemicals** *An A. B. C. Publication*

**A.B.C. = Audit Bureau of Circulations = FACTS as a yardstick of advertising value**



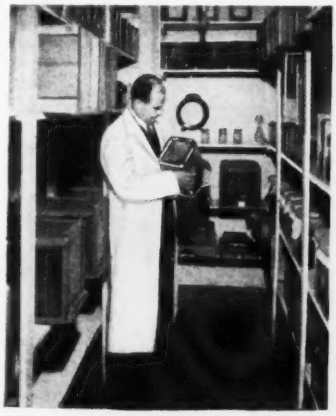
# Shimmy Shaking Sieves!

**They help portray McCormick Methods which assure you of Finer Pyrethrum and Derris Insecticides**



**Nowhere** in the world will you find Pyrethrum and Derris Powders which are ground finer than those produced by McCormick. Here, in action, is the Tyler Ro-Tap Testing Sieve Shaker which checks and tests with mathematical accuracy the fineness of every mill run of powder.

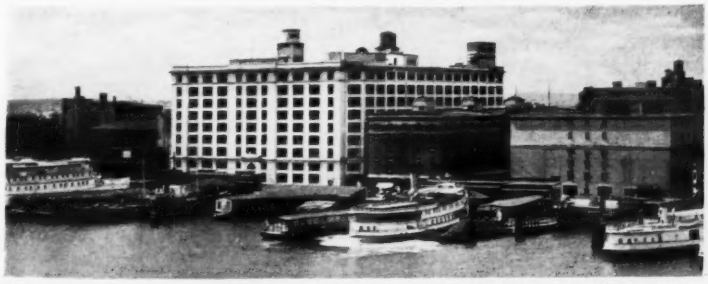
**Exactitude** in McCormick laboratory procedure is evidenced by the Chainomatic Scale which, used in chemical analysis, weighs rapidly to 4 decimal places! Accurate checks at every step, from raw materials to finished products, insure the uniformity and consistently high killing power of McCormick insecticides.



**No Rule of Thumb** guides the standards of effectiveness for McCormick insecticides. Every product is tested—every claim proved. For example, here is the Insectary where, with even the temperature controlled, flies are scientifically raised for actual killing tests.

**Releasing Flies** (left) in the "Peet Grady" Death House in the McCormick laboratories. At the right, a technician is about to release in the Death House the mist from an exactly measured quantity of a pyrethrum spray. Hours later, flies are checked numerically to ascertain by count and percentage the actual killing power of McCormick insecticides.

**Finished Product** ready to finish off insects! Because of their microscopic fineness, McCormick's Pyrethrum and Derris Powders contain a vastly higher number of killing particles to the ounce. Result: these particles stick more closely to insects, insuring a quicker, surer kill.



**Dominating** the skyline of Baltimore harbor is the great McCormick Building. Within its 12½ acres of floor space is one of the most complete analytical and biological laboratories in the insecticide industry. Such facilities assure products of dependability.

## McCormick

**Pyrethrum Powder** **Derris Powder**

**Derris Extract** **Derris Resinate**

**Rotenone Crystals**

For further information address: The McCormick Sales Co., Baltimore, Md. In Canada address: McCormick & Co. (Canada), Ltd., 454 King St., West, Toronto, Canada.

Why Worry About the Strength of Your Fly Spray

You can buy

PES-TOX

with a guaranteed rated killing power

Grade AA • Grade A • Grade B

Odorless or Perfumed

BUG-TOX

Specially manufactured to kill roaches, bed bugs and hard shelled insects

Pine or rose odors.

Standardize this season on the above products and watch your insecticide sales increase. With every shipment goes over a quarter of a century's experience in the manufacture of insecticides and disinfectants.

Made Right Baird's TRADE MARK REG. Priced Right

BAIRD & MC GUIRE, INC.

ST. LOUIS, MO. HOLBROOK, MASS.

# Sanitary Products

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

IF YOUR product is an insecticide, used and recommended solely as an insecticide and not for use on the bodies of humans or other animals, or in the treatment of disease, it **does not** come under the new federal Food, Drug and Cosmetic Act. It still comes under the Insecticide Act of 1910. Do not change your label if it has heretofore been satisfactory under the Insecticide Act. In fact, don't change anything! In spite of the fact that on at least four separate occasions we have made this statement here, we still continue to get letters asking this very question. So once again, we announce that regular insecticide products do not come under the drug law,—and neither do disinfectants not designed for use on human or animal bodies.

DURING the past month, we have seen more and more evidence that an increasing number of firms will undertake to put out lower priced fly sprays this season. Quite evidently, low cost and cheapness are to be the paramount features. Quality will of necessity be secondary. There is low-priced competition to meet and some are going to meet it in the only way they know how,—by cutting quality. We feel that a warning is in order, particularly to smaller manufacturers who are not equipped with proper testing facilities. To cut quality indiscriminately, particularly below the level of a Grade B product,—which is the approximate standard of the N.A.I.D.M. Official Test Insecticide,—is to invite trouble. The Food & Drug Administration is fully cognizant of the present price situation and what it may mean in quality of commercial insecticides. The Administration has stated its position on insecticide quality, and we believe this in itself should be a warning to manufacturers who are so intent upon cutting cost and price that they are forgetting everything else.

ACCORDING to the latest figures of the Bureau of the Census, household insecticides showed a sharp increase in manufacture and use in 1937 over previous years. Although prices were much lower than in past years, the volume increased over one-third. They give eighteen million dollars as the figure for 1937. Disinfectants showed only a slight increase in use and were recorded as six million dollars. The census also includes a figure of thirty-six million for "other household chemical compounds," which undoubtedly also contains some proportion of household insecticides, disinfectants and closely related products. Privately compiled figures show at considerably higher levels than the foregoing. However, both agree on a continued steady and marked increase in the consumption of practically all sanitary chemical specialties.

# MOSQUITO CONTROL

## There is a growing field for mosquito larvicides, a market worth cultivating

**By Duncan E. Longworth**

*Nassau County Extermination Commission*

MOSQUITO control is the scientific suppression of mosquito breeding, preventing the emergence of the adult mosquito to as great an extent as is humanly possible. It has grown from a few isolated endeavors into a scientific profession within two decades and today embraces quite a family of specialists. Much has been written in the past ten years on the subject, especially for the lay public. Newspapers and magazines have featured the interest created as a direct result of the depression. This interest evinced by the public followed the taxpayer's sudden concern regarding his tax monies and the manner of governmental expenditure in the depression years of the early 1930s and from the many new mosquito control projects created by the federal and state-municipal governments about the same time.

Mosquito control received the greatest impetus of its history when it was utilized by governmental agencies as a quick means of employing enormous forces of labor, with but little capital expenditure for tools, materials and equipment. Thus it was that the relief agencies employed thousands of men in many sections of the country digging ditches and filling in swamps and unsightly lowlands.

Cutting ditches and cleaning streams and swamps are necessary, but they are far from completing the necessary activities of a modern mosquito control agency. In the many activities, there is a great opportunity for cooperative effort with the insecticide manufacturing companies. This is a field which promises a golden future for those companies which realize the needs and which offer solutions to some of the many problems. In order that a comprehensive idea of these problems may be obtained, it is necessary to understand the fundamental purposes of control and the forms this control assumes in different localities.

Man has made great progress in controlling this public insect enemy number one, but unfortunately good control is the best result that can be obtained. Elimination of the mosquito has so far not been possible. I do not mean elimination of certain definite adult mosquitos that may be flying around in your house. I mean elimination of the problem of mosquito breeding in the millions of places adaptable for this breeding throughout the country. Scientific control, however, can be very effective, as has been proven by the twenty-two years of organized county-wide control in Nassau County on Long Island, New York, as well as several other localities with many successful years to their credit.

The first prerequisite in attacking the mosquito problem is to understand the species with which you have to contend. Species of mosquitoes are found in all climates from the tropics to the antarctic and arctic regions. There is no climate exempt from their depredations. On the continent of North America, representatives of eleven genera of the Culicinae have been found, totaling about 102 species. In the vicinity of New York City, about thirty-five species have been found.

Throughout the world, for control purposes, mosquitoes are grouped, regardless of species, under three general classifications. Those species that breed in salt or brackish water, or the salt marsh. Those that breed in fresh water, in pools, ponds, clogged streams and swamps. And those species that breed in standing water in any sort of container or depression around the home. In the parlance of the profession, they are generally termed: 1. salt marsh mosquitoes. 2. fresh water or woodland-swamp mosquitoes, and 3. domestic or "house" mosquitoes.

All localities have some mosquito which comes under the domestic classification. In most localities the domestic and the fresh-water breeders are found. Those districts bordering upon the seacoast have the added problem of the salt marsh species to contend with. This is the situation along the Atlantic Seaboard, where all three general types of mosquitoes breed.

During the first years of an organized mosquito control agency's existence, considerable attention is given to construction work. Irrigating systems are installed on the salt marshes, the normal natural flow of the streams is calculated and such ditching and cleaning performed as will maintain them in a clean free-flowing condition. The swamps are ditched for constant irrigation. In

Spraying mosquito-breeding waters with larvicide using portable hand pressure sprayers. These hand sprayers are used in remote swampy sections where the mechanical power-syraying equipment cannot reach.

all the watercourses, ponds and swamps, the places most subject to blockage are permanently corrected of this condition as much as is possible, and normal water levels are sought. After this initial construction is completed, the work of control becomes largely one of maintenance, coupled with inspection and larvicide spraying work and such other varied activities as educational campaigns.

On the salt marsh and the woodland swamps and streams, the work resolves into maintaining the control systems previously installed. Blockage and debris must be removed, stream levels and ditch sides must be maintained.

But in any community there are many mosquito breeding waters, largely created by man, that have no connection with the marshes, swamps, brooks, ponds and streams. These locations consist of water standing in depressions of all kinds such as village dumps, sewer disposal beds, garbage and rubbish disposal plants, roadside gutters, low lots surrounded by sidewalks, cement block works, sand pits, ruts in streets, excavations, and old cellars. These waters are not adapted to mosquito control by cleaning, or for the most part by filling. Many of them exist only after heavy rains or during periods of a high water-table. There are no natural enemies of the insect in these numerous places and man has had to use artificial methods of control.

The most practical control method as yet devised consists of treating these waters with some form of larvicide, thus killing the mosquito eggs, larvae and pupae therein. Most control agencies have an inspection system whereby each permanent breeding place of this type is recorded and areas assigned to inspectors. These inspectors make the rounds of their districts every week to ten days and when they find mosquito breeding, they report it to spraying crews. These crews, equipped with mechanized spraying outfits, apply larvicide to the breeding waters the following day.

The larvicide used in the control of these permanent recorded breeding places is generally of two types. The first and oldest in use is oil. The second is some form of pyrethrum extract larvicide. Many formulas for compounding other toxic substances with each of these two basic materials have been utilized.

The qualities desired in a mosquito spray, no matter what the base may be, are multiple. Perhaps the most important quality is the spreading coefficient, or the ability of the larvicide to cover a large area of water surface with an unbroken film, and to do so where the surface of the water is pierced with vegetation and debris. The toxic effect of the spray, other than the effect of the surface film, is important and aids materially in controlling the insect. In a good spray, this toxic effect will

A weekly inspection system of mosquito-breeding waters is conducted from March 15 through October 15, the mosquito breeding season. White dippers are used to aid in detecting larvae in the water.

be harmless to man, animals, fish and vegetation, although fatal to the insect.

The lasting quality of the spraying is very important. A compound which, when sprayed, will maintain an unbroken film for several days will assure control in that location just that much longer. A good repellent quality in the spray will deter the female insect from laying more eggs during the period of its effectiveness. Another very essential quality is that the spray be non-irritating to the men applying it.

Much progress can be made in this field. There is no mosquito spray today that cannot be improved in one or more of these essentials. Probably the most universal oil spray used today is what is commonly known as No. 2 fuel oil. This is often mixed with No. 4 fuel oil, which is also used alone. While these oils and mixtures are made to do the job, they lack much that is desired in a good mosquito oil.

The oil companies have not given this specialized field for their products much thought. This is a mistake. The field is large and growing every year. Furthermore the demand occurs at a time when the normal fuel oil business has slackened for the Summer season.

In recent years the pyrethrum larvicide mixtures have enjoyed an ever increasing market for mosquito control purposes. While they are most useful for control in many specialized types of places, their chief faults are their lack of lasting quality and their restricted use on waters containing organic compounds. It has been the writer's experience that oil mixtures and pyrethrum mixtures are both useful in mosquito control and at this stage neither supplants the other. If the pyrethrum spray could be so compounded that the spray had a lasting-repellent effect over a period of a week at the least, its usefulness and economy would be increased tremendously. Also, if the spreading coefficient of oil could be doubled, without sacrificing any other qualities, the economy of oil would be increased from many angles.

The addition of cresylic acid to oil, or derris to pyrethrum, and the addition of pine oil extracts and similar substances increase the desirable qualities of these spray compounds. Practically all of this work has been performed by the control agencies themselves and without the aid and assistance of the oil companies or insecticide manufacturing companies. There is much room for cooperative effort in this work and the companies that can increase the degree of these desired qualities in the mosquito spray will find a ready market for its products.

◆

### Dissolving Rotenone

Rotenone and its derivatives, pyrethrins, and extracts of pyrethrum and derris root are rendered soluble in petroleum distillates of the kerosene type by including in the solutions a cyclic ketone such as cyclopentanone or cyclohexanone, and a partly or completely hydrogenated cyclic hydrocarbon such as tetra- or deca hydronaphthalene. Aqueous emulsions of these solutions may be prepared with the aid of neutral emulsifying agents such as a neutralized sulfonation product of a higher aliphatic alcohol. Deutsche Hydrierwerke A.-G. German Patent No. 665,216.

◆

### Derris Emulsions

Aqueous emulsions or suspensions of the active principles of the roots of derris, cube and similar plants are obtained by using as emulsifying agent an "active cation" substance such as lauryl trimethyl ammonium chloride or the salts of products resulting from the reaction of oleic acid chloride on diethyl diaminoethane etc. Castas Saliaris. French Patent No. 829,339.

◆

### High Activity Derris

A colloidal gel artifically prepared is used to absorb a solution in a volatile solvent of the active principles of the roots of derris, cube and similar plants. By evaporation, a toxic product of high activity is obtained. Costas Saliaris. French Patent No. 829,338.

# INSECTICIDES and the Dealer—

**What does the retailer do to push their sale, if anything? What determines what he recommends to users? Does he know insecticides? A staff investigation among some grocery, drug, and hardware dealers.**

IF THE average retail dealer knows anything about fly sprays, and other household insecticides, his ability to keep his knowledge a secret is indeed quite remarkable. Although the retail grocer, the druggist, and the hardware dealer represent the front line of contact between the insecticide manufacturer and the ultimate consumer, it is truly not a "front line" which on the whole can be of help to the manufacturer in selling more insecticides to the public. We come back from a look into the retail sales situation in household insecticides with the distinct impression that those insecticides which find their way into home consumption, do so in spite of the feeble and uncertain efforts of the retailers. In fact, we wonder if the average retailer does not retard insecticide sales by his apparent almost complete ignorance of them and their proper use. Although this condition is not universally true, it exists in far more than a majority of cases among dealers investigated. It would appear under the circumstances that insecticide sales are in direct proportion to the extent and effectiveness of advertising in any locality, and that the retailer is but a minor factor in pushing sales or in brand selection.

A number of retail dealers were interviewed by a representative of SOAP in three widely separated areas of the New York Metropolitan territory. They were all types of stores in all kinds of neighborhoods and represent a fair cross-section of the retail grocery, drug, and hardware trades, the three outlets which distribute the bulk of household insecticides in the urban communities. There appeared to be little variation in the reactions or answers to questions or the mental attitude toward insecticides among these three classes of dealers. Likewise, there appeared to be little variation in stores in different localities. With this in mind, we are taking the liberty of classifying them all as retailers and discussing them as a unit, regardless of store or location.

The average retailer, in his insecticide selling, was found to have little or no knowledge of the type, nature, use and limits of household insecticides. The average number of brands carried by each retailer was six. This included most of the better-known brands, some of the lesser-known and others put up for the retailer himself with his own name on the label. The most brands carried by any one retailer was ten and the least three. Drug stores averaged seven different brands; hardware stores, six, and groceries, five.

It was unanimously agreed by groceries and drug stores alike that the liquid type of insecticide was the best seller, because as they put it, "it was easier to apply." Five out of ten hardware retailers swung along with the druggists and grocerymen. Three, however, thought that powders sold best and two thought that honors were evenly divided.

The majority of customers, it was found, asked for insecticides by brand name when they came into the store, and not for something to meet a definite need such as something to kill roaches. From this bit of information, we naturally concluded that the well-advertised brands sell best, and such is the case. It was found, though, that a substantial number of people did ask for an insecticide in order to fulfill a definite need. Here is where the retailer uses his "knowledge." As a rule the customer knows the storekeeper fairly well and his confidence in his suggestions and in the recommendations he makes for a certain product. With this in mind we asked, "what insecticides do you recommend when the customer doesn't ask for a certain brand?" The answer received was in three out of every four cases, "the one giving the most profit." The merit of the product seemed to have no bearing upon

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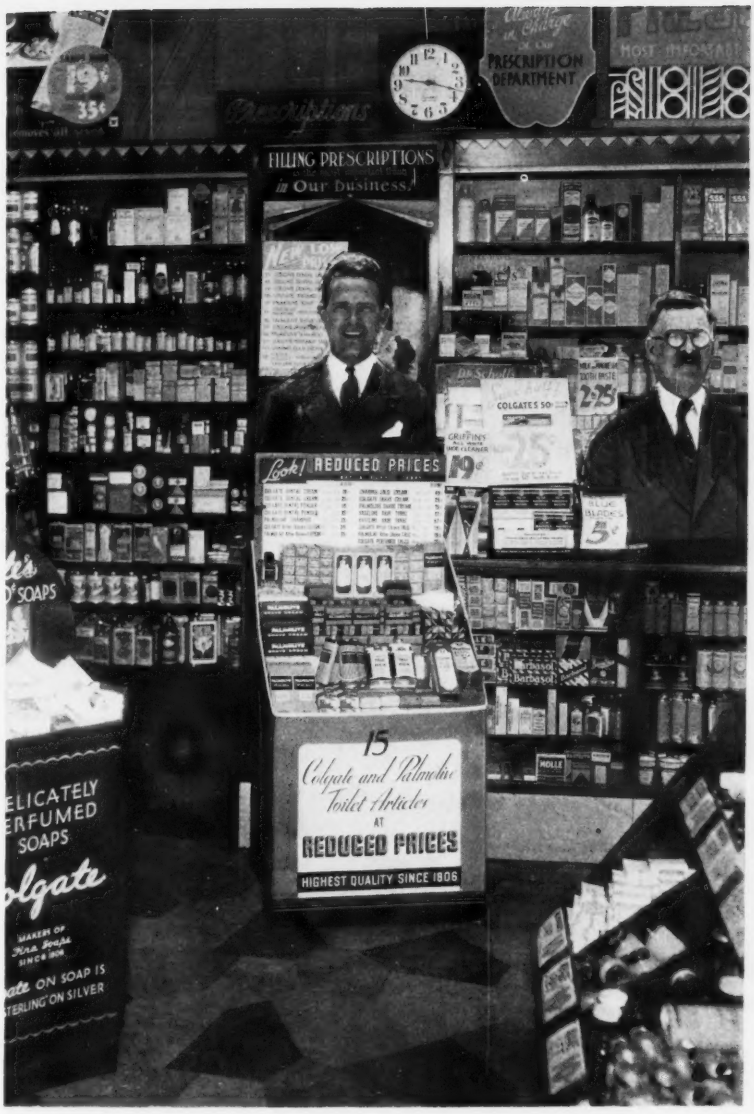


In the sale of household insecticides, the manufacturer cannot expect much in the way of help from the proprietor or clerks in the average retail store

the choice, and when questioned, the retailer answered in most cases to the effect that all insecticides were the same regardless of brand or manufacturer. From this we might judge that among most retailers, then, manufacturers cannot expect to promote the sale of their products on a quality basis. Wider profit margin appeared from this to be the obvious answer.

Even if every retailer wanted to recommend that insecticide which gave the best results for any particular purpose,—and some stated they did, they were found to lack the necessary knowledge to recommend intelligently. As already noted, some did recommend that product which they *thought* would give the best results, but upon asking on what their recommendations were based, they answered, "it is our best seller" or "that's what most people ask for."

Associated with the recommendations of the retailer were his sales efforts in behalf of various insecticides. Which ones? Again those giving the most profit. Out of twenty-seven stores visited, four pushed a product because it was their own brand, four others pushed nothing in particular, and the rest pushed the insecticide giving the most profit.

Twenty-two retailers stated that they carried a spring window display annually on all brands of insecticides and allied products. Those not displaying were two drug stores and three groceries. All hardware stores were found to employ this method of putting the product before the public. On the whole the retailer felt that a spring window display was to his advantage and did increase sales to some extent. In some cases, these displays were repeated throughout the summer at various intervals.

WHEN asked if lower prices of insecticides last year helped to increase sales volume, the retailers, with the exception of two, agreed that sales had increased. Eleven attributed this increase to the lower prices, but fourteen insisted that the additional sales were due to a larger number of insecticidal needs than previously. Upon questioning further, several were certain that the purchase of insecticide by the average consumer was due solely to the consumer's need and not because of lower prices. If there were no need, they held, why would the customer purchase the product at all—irrespective of price? Also, if there were a sufficient need, the purchase would be made regardless of price within reason.

Almost all of the retailers carried a small line of sprayers, the hardware stores from ten cents to the more expensive continuous types, and the druggists and grocerymen from ten cents to about fifty. In all cases, the retailer when selling a liquid insecticide, attempted to sell a sprayer, the one selling best being the twenty-five cent size. Two groceries and two drugstores out of the twenty-seven stores failed to carry this additional item. They said that they couldn't be bothered!

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# PYRESSENOL

**D&O ESSENOL,** embodying the penetrating principles of processed essential oils, and **PYRETHRUM CONCENTRATE No. 20,** providing the toxic principles of pyrethrum, in combination produce a much less expensive and better Insecticidal Concentrate,

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A blend of:
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**PYRESSENOL No. 20** gives higher kill than Pyrethrum No. 20 in the same dilution at lower cost.

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The **ESSENOL in PYRESSENOL** carries a smaller pyrethrin content **into the bodies of insects** with greater kill than obtained from the higher pyrethrin content in Pyrethrum No. 20.

Pyrethrum provides the toxic principle. ESSENOL CARRIES IT IN.

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Whether you obtain PYRESSENOL No. 20 from us, or blend D&O ESSENOL with your own Pyrethrum No. 20, you will get the same or greater killing power at **decidedly lower cost** than from straight Pyrethrum No. 20, in the same dilutions.

With D&O ESSENOL at $2.25 per gallon, in drums, fob New York, figure the cost of making Pyressenol by mixing Essenol with your own Pyrethrum Concentrate, then calculate the reduced cost of the finished insecticide from Pyressenol and "POCKET THE PROFITS."

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Did the retailer do any special pushing of sales or suggest insecticides verbally when a customer came into the store? Only two hardware stores of all the retail stores visited were interested enough in the sale of insecticides to go out of their way to make a sale. These stores, it was interesting to note, seemed more prosperous than the rest. These two retailers went further and made outside sales by visiting local apartment houses, factories, cemeteries, etc. They sold a greater amount of insecticides in bulk in this way and also increased their small package sales. In selling to an apartment house it was their custom to approach the superintendent of the building. If he bought their insecticide he eventually recommended it to tenants in the building who themselves are prospective buyers of the same material. Note was made of the fact also that the retailer is usually hesitant to suggest an insecticide without a request from the customer. As one retailer put it, "It's difficult to ask Mrs. Smith to buy an insecticide for roaches or bedbugs, she might take it as an affront and trade elsewhere."

The turnover of insecticide powders and sprays was found to be small in comparison to other goods, probably due, as most retailers said, to seasonal demand. The average turnover of stock amounted to twice a year, usually once each in the spring and fall. Those having a greater turnover were found to be the chain grocery stores. Because of local warehouse facilities, each chain grocery carries a smaller amount of each kind of insecticide and naturally has a greater turnover. Where the stores are independently owned, however, insecticides are bought wholesale in large quantities. We noted that insecticides in chain groceries were more often attractively displayed in prominent positions than in independent stores. This is probably another factor explaining the greater turnover of chains.

Price protection by some manufacturers looms important to all retailers. The retailers did not mince words in denouncing the practice that enabled the man around the corner to undersell them. In some cases the retailers stated they were forced to sell insecticides below cost in order to meet near-by competition, particularly chain stores. As a result they feel unkindly towards the manufacturer of that particular insecticide and as a consequence, invariably attempt to push the sale of competing products. One of the largest and best-known insecticide manufacturers has incurred much ill-feeling from the retailers because of more or less recent price cuts which left the dealer holding the bag.

Undoubtedly one of the foremost thoughts in the minds of retailers is price protection. With greater protection on price and a wider profit, he might feel more kindly toward the manufacturer and be more willing to educate himself so that he could increase his insecticide sales. The average retailer is, at present, groping in the dark when it comes to the merchandising of insecticides and the manufacturer unquestionably suffers as a result.

Based on the views expressed by those dealers which were interviewed, the conclusion is quite logical that household insecticides are a small part of their retail business and in comparison to many other products, is of minor importance to them. Under the circumstances, it is not difficult to see why the average retailer knows very little about insecticides, why he fails to push their sale, and why his recommendations to users are so limited in their basis on sound reasons. The average retailer, usually a poor merchandiser at best, cannot be expected to work up any great enthusiasm for insecticide sales under present circumstances. With lower prices than those which were in effect two and three years ago, his profit margin is consequently lower,—and the sales enthusiasm of retailers invariably is in direct proportion to the margin of profit in any item. Note the willingness to push private brand insecticides, the quality of which compared to the run of standard brand items has usually been low.

The average retailer is lazy,—and he is profit conscious. If he can make a good margin without too much sales effort, he is strong for that item or items, as might be expected. Insecticides, being on the whole items of necessity which are bought when needed, and devoid of anything resembling sales appeal in themselves, do not in the present scheme of retail merchandising fall in the class of such items. Quite obviously, insecticides are bought, and not sold, that is as far as the ultimate consumer is concerned.

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### Pyrethrum Treatment

Insecticidal products are prepared from pyrethrum flowers by subjecting the flowers and a carrier liquid substantially non-volatile under the conditions of distillation, to short-path high-vacuum distillation at an elevated temperature. Canadian Industries Ltd. Canadian Patent No. 380,341.

—— ♦ ——

### Rate of Disinfection

A new method for determining the rate of disinfection employs an apparatus in which contact between organisms and disinfectant is made for periods of about 0.2 second. It consists essentially of a pipet from which a drop of disinfectant can be released, a platinum loop placed in the path of the falling drop, and below these on a revolving turntable a Petri dish containing water or a solution which arrests the action of the disinfectant, and a mixing baffle. This permits the determination of disinfection rates of strong disinfectants without appreciable dilution. Moses L. Isaacs. *J. Bact.* **36,** 547-57.

—— ♦ ——

### Vermin Destroyers

Aluminum phosphide, which evolves phosphine in moist air, is used for destroying rats, mice, beetles and other vermin. Crude aluminum phosphide containing aluminum sulfide may also be used. Erich Kah. German Patent No. 667.257.

# DIHYDROLIN

(HYDROGENATED ROTENONE PRODUCTS)

## CONTAINS
## DIHYDROROTENONE
## *which has*
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Increase the length of the toxic life of your sprays and at the same time effect a substantial savings with the use of Dihydrolin.

*Tests show Dihydrorotenone to possess *twice the stability* of rotenone in the direct rays of the sun.

Laboratory and exhaustive field tests have proven conclusively the potency and resistance to deterioration of Dihydrolin.

With the use of Dihydrolin, grade AA household insecticides may be manufactured at a savings of over 30% in the cost of your active ingredients. In addition to the decided *savings* you get *new insecticidal* properties plus more *stability.*

*Journal of Economic Entomology, Volume 26, No. 2, April 1933.

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# Derris Stability - - -

## Effect of temperature and light upon the decomposition of derris

**By Robert D. Chisholm**

*Bureau Entomology & Plant Quar., U.S.D.A.*

DURING a study to improve the repellency of derris for the Japanese beetle and to reduce its decomposition by light, it was noted that from the same spray mixture there was considerable variation in the amounts of derris decomposed upon exposure to sunlight of the deposits on glass plates on different days. Jones and coworkers[1], using glass slides heavily coated with dried derris paste, had shown that the toxicity of derris was reduced after exposure to sunlight, but that heat was not an important factor at temperatures produced by sunlight. Since they had used deposits that were much heavier than ordinary spray residues, it was considered desirable to study the effects of both temperature and sunlight upon the decomposition of derris when present in very light deposits. These studies were made from September through December, 1935, at the Moorestown, N. J., laboratory of Japanese and Asiatic beetle investigations.

Three derris sprays were used, which contained the following materials on the basis of 100 gallons of spray: 3 pounds of derris (4.3 per cent rotenone and 16.4 per cent total carbon tetrachloride extractives) alone and with 3 pounds of either a casein[2] or a gum-arabic emulsion of rosin residue.

The several spray mixtures were applied[3] to 5 by 7 inch glass plates with a commercial paint gun, which produced a very light, uniform deposit. The test plates were exposed under various conditions of temperature and light. Analyses were made to determine the amount of rotenone in the original derris deposit and in the deposits after 5, 10 and 15 days' exposure. The derris deposits were extracted, and the rotenone content was determined by the Gross-Smith method[4]. The red color developed in this test is proportional to the sum of the amounts of rotenone, deguelin, and possibly other derris constituents in the solution. However, for the sake of simplicity, the results were calculated on the basis of micrograms per square centimeter, and reported as rotenone. The amount of rotenone determined was considered as being proportional to the amount of undecomposed or active derris. Goodhue's[5] modifications of this test was not out when this work was done.

One group of plates was exposed on an open sun rack equipped with a cover, which was closed at night and during cloudy weather. The

**Table 1.—Effect of Temperature and Sunlight Upon the Decomposition of Derris Deposits on Glass Plates**

| *Place of Exposure* | *Temperature* | *Emulsion Added to Derris*[6] | *Portion of Original Deposit Undecomposed After Exposure for— 5 Days* | *10 Days* | *15 Days* |
|---|---|---|---|---|---|
| | °F. | | *Per Cent* | *Per Cent* | *Per Cent* |
| Open sun rack | 32.5 (mean) | Casein | 88 | 66 | 33 |
| | | Gum arabic | 82 | 64 | 45 |
| | | None | 80 | 70 | 40 |
| Greenhouse | 70-75 | Casein | 71 | 57 | 29 |
| | | Gum arabic | 60 | 50 | 30 |
| | | None | 66 | 44 | 23 |
| Constant-temperature cellar | 37 | Casein | 100 | 100 | 100 |
| | | Gum arabic | 100 | 100 | 100 |
| | | None | 100 | 100 | 91 |
| | 70 | Casein | 100 | 100 | 100 |
| | | Gum arabic | 100 | 100 | 100 |
| | | None | 100 | 100 | 91 |
| Oven | 100 | Casein | 89 | 78 | 78 |
| | | Gum arabic | 100 | 91 | 91 |
| | | None | 100 | 100 | 88 |
| | 120 | Casein | 75 | 75 | 75 |
| | | Gum arabic | 78 | 78 | 66 |
| | | None | 78 | 78 | 78 |

[6]3 pounds of derris and 3 pounds of emulsion per 100 gallons of spray.

[1]Jones, H. A., Gersdorff, W. A., and Gooden, E. L. Loss in toxicity of deposits of rotenone and related materials exposed to light. Jour. Econ. Ent. 26:451-470. 1933.

[2]Goodhue, L. D., and Fleming, W. E. Stickers for derris applied as an insecticidal spray. Jour. Econ. Ent. 29:580-583. 1936.

[3]Chisholm, R. D., and Goodhue, L. D. Derris-Effects of sunlight and rain on derris deposits as studied in the laboratory. Soap 14(12):117, 119, 131. 1938.

[4]Gross, C. R., and Smith, C. M. Colorimetric method for determination of rotenone. Jour. Assoc. Off. Agr. Chem. 17:336-339. 1934.

[5]Goodhue, L. D. An improvement on the Gross and Smith colorimetric method for the determination of rotenone and deguelin. Jour. Assoc. Off. Agr. Chem. 19:118-120. 1936.

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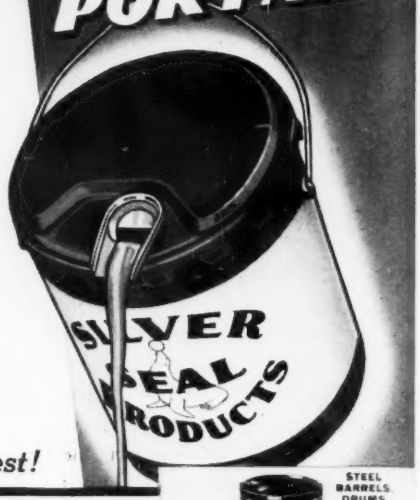


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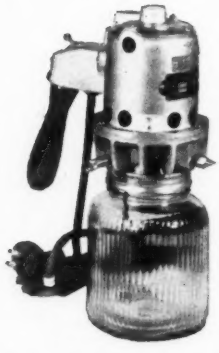

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mean temperature during the entire exposure period was 32.5° F.

Concurrently with the outdoor test, another group of plates was exposed upon an inclined sun rack, with southern exposure, in a greenhouse where the temperature was maintained at 70-75° F.

Two groups of plates were exposed in constant-temperature cellars in the absence of light. The temperature in one cellar was 37° F., and in the other it was 70° F. Fans maintained a circulation of air over the plates.

Two groups of plates were exposed in constant temperature ovens in the absence of light. The temperature in one oven was 100° F., and in the other 120° F., or the maximum summer orchard temperature in this area.

The results of these investigations are presented in Table 1.

Differences, were noted, in the percentages of the original deposits from the three sprays undecomposed after exposure, but these differences were considered insignificant. Conseqnently, averages of the three sprays are used for the purpose of summarizing the results. It was found that, in spite of the filtering effect of the greenhouse glass on the transmitted light, afer 15 days' exposure the decomposition of the derris deposit in the greenhouse was about 73 per cent, while outdoors it was 60 per cent; however, the temperature in the greenhouse was higher. On the other hand, when the derris was exposed at about the same temperatures as those outdoors and in the greenhouse, but in the absence of light, there was no appreciable decomposition.

The deposits exposed in the constant-temperature ovens in the absence of light at 100° F. showed an average decomposition of about 14 per cent, while those at 120° F. showed about 27 per cent. Although the temperature was increased from 70-75° F. plus sunlight to 120° F. without sunlight, the decomposition in the oven was only about one-third of that in the greenhouse.

In the several groups that were exposed in the absence of light there was no appreciable decomposition below 70° F., but as the temperature increased above this point the rate of decomposition also increased.

## Summary

The effect of temperature and light on derris deposits was studied by spraying several derris mixtures on glass plates and determining the rotenone in the deposits after exposure under various conditions of temperature and light.

Derris deposits were decomposed both in the presence and in the absence of sunlight. The rate of decomposition was increased when the temperature was increased. After exposure for 15 days to sunlight at 32.5° F., an average of 60 per cent of the deposit was decomposed, while 73 per cent was decomposed at 70-75° F., even though the latter deposits were subject to the screening effect of greenhouse glass. In the absence of light and at similar temperatures there was no measurable change. However, when the temperature was increased to 120° F., about one-fourth of the deposit was decomposed.

—— ♦ ——

### Insecticide Analysis

A combined cold chloroform extraction for the determination of the extract and rotenone contents is suggested in the analysis of derris and lonchocarpus roots. No toxicarol could be found in lonchocarpus extracts. The greater insecticidal activity of derris root may be due to the presence of "protoxicarol," which is absent from the lonchocarpus root. P. A. Rowaan and A. J. van Duuren. *Chem. Weekblad* **35,** 755-6.

—— ♦ ——

### Weathering of Cubé

Deposits of cubé on cabbage deteriorated on exposure to weather but retained some toxicity after five days. Precipitation was second to duration of exposure in causing deterioration of cubé deposits. Deposits from water suspensions of cubé plus a spreading agent gave greater mortality of the imported cabbage worm in laboratory tests than dust deposits. Equally good mortalities were obtained in the field even though only half the amount of cubé was used per acre in the sprays as in the dusts. C. B. Wisecup and L. B. Reed. *J. Econ. Entomol.* **31,** 690-5.

—— ♦ ——

### Determination of Pyrethrins

The material separated by extraction is saponified and the chrysanthemic acids are separated by means of the soluble barium salts from extraneous acids. From one portion of the acidified filtrate the monocarboxylic acid is extracted by low-boiling light petroleum at 1-2° C. and determined by Wilcoxon's method with Deniges' reagent. The two acids are liberated from another portion of the filtrate, the monocarboxylic acid is removed by distillation in steam and the dicarboxylic acid is titrated against 0.02 Normal sodium hydroxide solution. The method may be applied to the testing of the quality of pyrethrum powder. G. Canneri and D. Bigalli. *Ann. chim. applicata* **28,** 15-22; through Chem. Abs.

—— ♦ ——

### Extracting Pyrethrins

Pale-colored extracts containing a high proportion of pyrethrins are prepared by extracting pyrethrum flowers with acetone or an equivalent solvent, removing the solvent, treating the extract with a diluted alcohol such as 80 per cent methyl alcohol, rejecting the residue, removing the alcohol, treating the product with a petroleum hydrocarbon and rejecting the residue. Stafford, Allen & Sons Ltd. and Trustham F. West. British Patent No. 493,074.

—— ♦ ——

### Cleanser and Disinfectant

A cleansing and disinfecting composition contains solid sodium silicate mixed with 10-15 per cent of free caustic soda and with solid calcium hypochlorite. Such a product is used as an aqueous solution. I. G. Farbenind. A.-G. German Patent No. 668,206.

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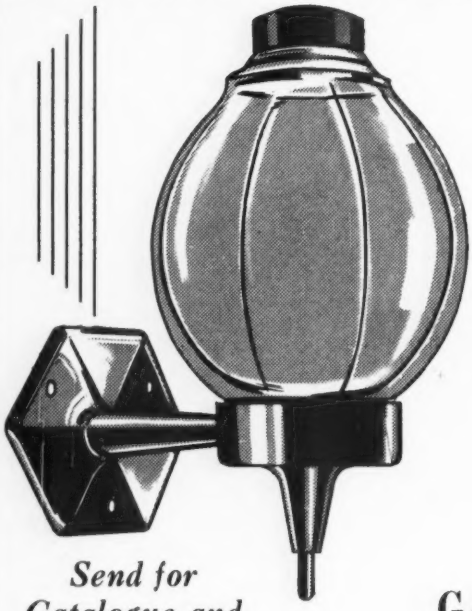

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# WHITE SHOE CLEANERS

***First of a series of three articles on composition, production, testing, packaging and equipment.***

*Part II*

**By Charles S. Glickman**

ONE of the earliest varieties of white shoe cleaner on the market and is still present, although to a small extent, is the so-called stick type. This product is non-adhering and is therefore short-lived in effect. The advantages of this type of product are its ease of application, and low cost per application.

It is prepared by kneading a white chalk together with a minimum amount of water carrying in solution an adhesive such as glue, etc. The paste is moulded with the aid of heat and pressure into stick or bar form. This results in a cake of desired firmness, yet loosely enough bound to permit its transfer to the leather by rubbing.

A typical formula is as follows:

| | |
|---|---|
| Calcium carbonate | 99 |
| Animal glue | 1 |
| Soda salicylate | .05 |
| Water | 20 |

The process is as follows: The preservative is dissolved in about a quarter of the water. The glue is then dissolved in all of the water by means of heat. The calcium carbonate is placed in a kneading or paste mixing machine and the glue solution added to form a plastic mass. This plastic mixture is then placed in heated molds where it is subjected to pressure causing the material to pack rather tightly and at the same time dehydrate so as to result in a dry solid and adherent mass which can then be packaged.

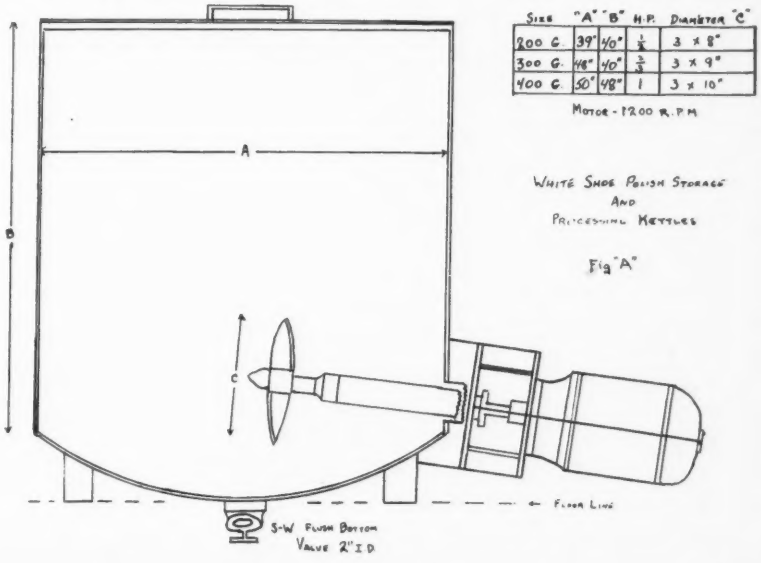
### Lacquer Products

| | |
|---|---|
| 1. Titanium Dioxide | 25 |
| Cellulose Nitrate | 8 |
| Ester Gum Pale | 6 |
| Dibutyl Phthallate | 6 |
| Ethyl Lactate | 8 |
| Butyl Acetate | 12 |
| Butanol | 10 |
| Toluol | 25 |

*Process*: The cellulose nitrate is dissolved in the lacquer solvents and the resulting solution diluted with the other solvents and gums. The pigment is then ground into this solution.

According to Auch, the pigment content of commercial samples ranges from 16.80 to 26, averaging 21 per cent for the liquid type of product, and ranging from 57.70 to as high as 64.80 per cent for the paste type of product. According to Levey, the amount of pigment ranges from as low as 15 to as high as 30 per cent for the liquid type and the gum content ranges from 5-7 per cent.

There is still another form of white shoe cleaner for which no definite formula or process is stated. This is the so-called shoe-soap. Essentially, this product is merely a concentrated soap solution into which has been dispersed, a high whitening power pigment. These products can be prepared by making soap solutions of from 25 to 40 per cent content and the balance pigment. In preparation, about 12 to 20 parts of soap by weight are dissolved in an equal amount of boiling water and the solution slowly stirred to insure thorough solution. To this hot mixture is then added from 60 to 75 parts of titanium dioxide by weight


Size "A" "B" H.P. Diameter "C"
200 G. 39" 40" ½ 3 x 8"
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B
C
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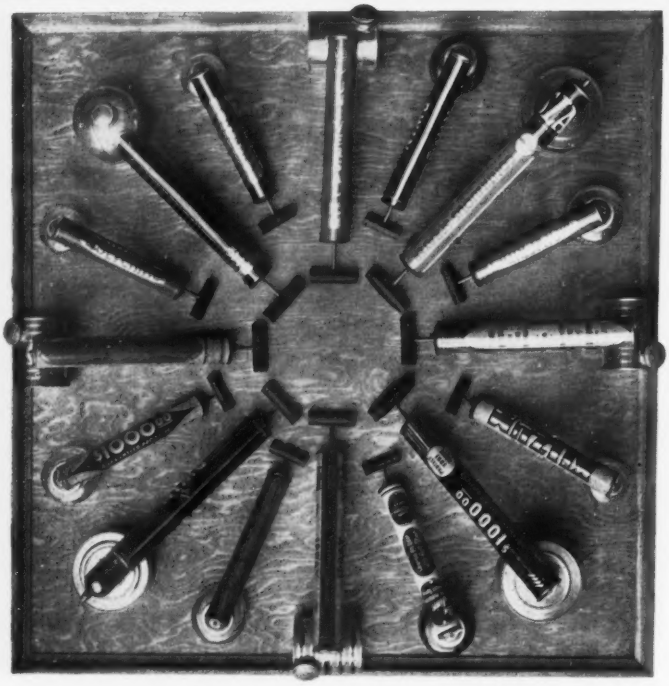

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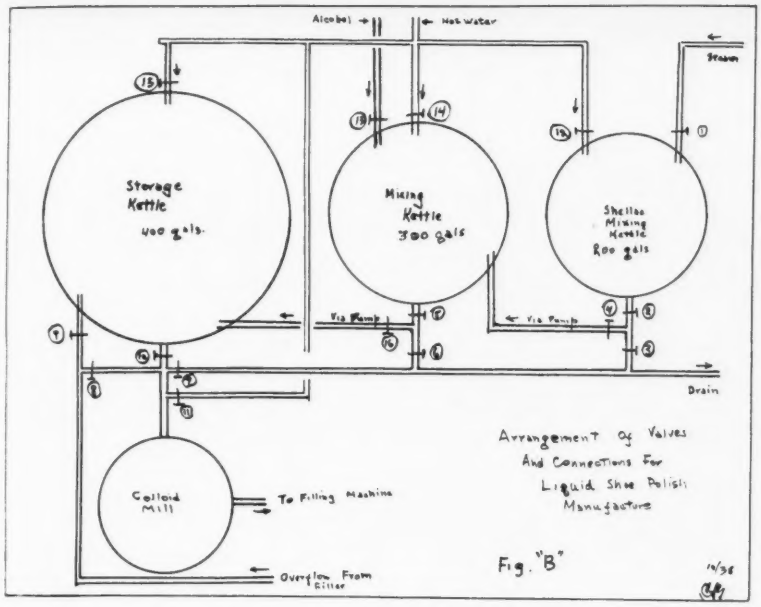


(enough pigment to make a total of 100 parts) and this mixture passed through a colloid mill, ointment mill or roller mill 'till uniform in texture. These products are best packed hot in flat cans or wide-mouth jars.

Titanium dioxide in its various blends has the property of slight abrasiveness, a property not possessed by other pigments. This property serves to enhance the cleansing action of the polish by breaking down the dirt aggregates and allowing the solvent or soap greater freedom of action. The abrasive action also helps to bind the pigment more firmly to the leather surface. For these reasons as well as its high covering power, it should be used exclusively as the pigment in polishes created specifically for rough finish or nappy leathers and fabrics. Its use in low concentration, which will produce the same degree of whiteness as a poorer covering pigment, allows for less concentrated and hence more dilute solutions thereby eliminating the possibility of giving the leather a "laid" or painted appearance.

While it is not possible to discuss individual formulas for every possible combination of components in each of the three groups outlined in the first article of this series, the matter of adding wax to white shoe cleaners is worth further consideration. Solutions or dispersions of carnauba and other waxes, usually of about the same composition as water-emulsion wax polishes, add firmness and gloss to the dried coating of shoe white. The incorporation of such wax emulsion to the shoe cleaner, whether liquid or paste, is to give a subdued gloss effect, differentiating such cleaners from those which leave a dead-white finish. This gloss can also be heightened where desired by light buffing. Furthermore, the presence of wax adds to the adhesive qualities of the cleaner and reduces any tendency to rub off. For such leathers as kid and smooth calf, a slight gloss gives a better finish which is more in keeping with the natural surface of the leather.

The proportion of wax emulsion to be added can range anywhere from five per cent up to 25 per cent of the total weight of the cleaner. This added volume of wax emulsion can be calculated as replacing an equal quantity of water in formulation of standard products. Additional benefits in the appearance of the finished cleaner are derived from these wax additions, the added suspending power of the emulsion and the creation of a white upper layer in the package making for better looks. For those manufacturers who are interested in a non-separating, all-white product, there may be possibilities here. The wax emulsions are not affected by alkali or soap in standard white cleaner formulas, but are affected by alcohol and hydrocarbon solvents.

Different types of leathers and other materials used in the manufacture of white shoes naturally require different treatment in the matter of cleaning and polishing. The leathers commonly employed are kid, calf, suede, elk, buck, and of course imitation buck. There are also to be found, patent leathers, satins and gabardines as well as canvas. Of the leathers, only the buckskin and its imitations require products of low pigment concentration as do satins, gabardines and canvas. In these products, soaps or solvents of high dirt or stain removal powers should be used. In other words, the surface being polished should be thoroughly cleansed of stains and dirt, and a very thin but intensely white layer of pigment left on it. High concentrations of pigment will cake the surface and detroy the nap effect.

The smoother leathers require products of lesser dirt removal powers but with pigment content which will result in smooth and even whitening effects which can be made either glossy or not, as was mentioned before in the discussion of waxes. It is therefore, possible that concentrated products may be used for the smooth leathers and their dilute solutions for nappy or rough leathers and fabrics.

While still on the subject of formulation and products, the subject of "non-rubbing off" should be considered. The sudden outcropping of a wide variety of so-called non-rubbing off white shoe polishes has given rise to a rather strange state of affairs. After all, in the final consideration, it is much simpler for a manufacturer aided and abetted by his sales manager either willingly or otherwise to follow the path of least resistance and supply the buying public with that product which it believes it desires rather than create a better and more meritorious product which will require large sums of money to advertise. If such a course

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of advertising is followed and proves successful, then a vicious circle makes its appearance in the form of smaller manufacturers with lower overheads and a willingness toward adulteration who make it their business to cash in on the free advertising.

After all, the average buyer considers and has every right to believe that a product advertised as non-shedding or non-rubbing off is exactly what it is claimed to be. Now examine at closer range, the average product so labeled. It is composed of a certain amount of pigment, often of inferior variety, suspended in a vehicle of either solvent or aqueous type and containing a very small amount of adhesive, if any. The directions accompanying this average product usually read as follows: "Apply the polish after thoroughly shaking the contents (in some cases a hammer would be needed to budge the pigment from the bottom of the container), with the enclosed applicator. Use wide, short or circular strokes so as to cover the surface thoroughly and evenly. *When dry, brush off or polish with a cloth.*

This in effect is comparable with the famous mosquito killer known of yore. It consisted of two square blocks of hardwood and was used by first catching the mosquito, and then convincing him that he ought to stand, lie or sit on the lower block while the other block was brought down upon him with a sharp motion from above.

That is practically what is being done with the type of product described. The solvent or soap is allowed to pursue its detergent course leaving the pigment deposited loosely on the surface. If this was not brushed off, it cannot help but rub off on trouser legs or cuffs. So, it is brushed off first, generally leaving no pigment at all. Then, why was it put into the product in the first place? What the writer understands by a polish that will not rub off is one that will dry to an even coating on the leather, be not brittle, require no brushing, and which can be passed over blue serge cloth without leaving any white streaks or powder. How many of the so-called non-rubbing-off polishes on the market can pass such a test?

The accompanying table lists graphically a series of experiments combining soap, shellac, titanium dioxide and solvents in a variety of polishes and discusses the effect of varying the components.

The various combinations listed have been compared from the following standpoints:

1. Appearance in the package.
2. Adhesiveness or retention after use.
3. Whitening or covering power.
4. Detergent power or stain and dirt removal.
5. Ease of reshaking in the container.
6. Gloss and general appearance on the shoe.

In order to avoid possible error which might enter into the results, the products were prepared in 8 oz. amounts and stored in identically shaped cylindrical bottles of constant width. The samples were then permitted to stand at room temperature for a period of two weeks during which time they were not handled in any manner whatever. Where certain results were obtained which could

| *No.* | *Soap* | *Shellac* | *$TiO_2$* | *Water* | *Alcohol* | *$CCl_4$* | *Naphtha* | *Wax* | *Remarks* |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 9.1 | 81.8 | 9.1 | none | none | none | none | none | SOAP ↓ SHELLAC ↑ $TiO_2$ = K |
| 2 | 18.2 | 72.7 | 9.1 | | | | | | |
| 3 | 27.3 | 63.6 | 9.1 | | | | | | |
| 4 | 36.4 | 54.5 | 9.1 | | | | | | |
| 5 | 45.4 | 45.4 | 9.1 | | | | | | |
| 6 | 54.5 | 36.4 | 9.1 | | | | | | |
| 7 | 63.6 | 27.3 | 9.1 | | | | | | |
| 8 | 72.7 | 18.2 | 9.1 | | | | | | |
| 9 | 81.8 | 9.1 | 9.1 | | | | | | |
| 10 | 17.3 | 34.7 | 13.3 | 34.7 | none | none | none | none | |
| 11 | 19.0 | 38.2 | 14.3 | 28.5 | | | | | |
| 12 | 21.0 | 42.0 | 16.0 | 21.0 | | | | | |
| 13 | 24.0 | 47.0 | 17.0 | 12.0 | | | | | |
| 14 | 21.0 | 31.0 | 17.0 | 31.0 | | | | | |
| 15 | 24.0 | 35.0 | 17.0 | 24.0 | | | | | |
| 16 | 26.0 | 40.0 | 21.0 | 13.0 | | | | | |
| 17 | 26.6 | 26.6 | 20.2 | 26.6 | | | | | |
| 18 | 30.8 | 30.8 | 23.0 | 15.4 | | | | | |
| 19 | 17.0 | 55.0 | 17.0 | 11.0 | | | | | |
| 20 | 15.0 | 50.0 | 15.0 | 20.0 | | | | | |
| 21 | 14.0 | 45.0 | 14.0 | 27.0 | | | | | |
| 22 | 28.0 | 28.0 | 16.0 | 28.0 | | | | | |
| 23 | 78.0 | none | 13.0 | none | none | none | none | 9.0 | SOAP ↑ WAX ↓ $TiO_2$ = K |
| 24 | 69.0 | | 13.0 | | | | | 18.0 | |
| 25 | 61.0 | | 13.0 | | | | | 26.0 | |
| 26 | 52.0 | | 13.0 | | | | | 35.0 | |
| 27 | 43.5 | | 13.0 | | | | | 43.5 | |
| 28 | 9.0 | none | 13.0 | none | 78.0 | none | none | none | SOAP ↓ ALCOHOL ↑ $TiO_2$ = K |
| 29 | 18.0 | | 13.0 | | 69.0 | | | | |
| 30 | 26.0 | | 13.0 | | 61.0 | | | | |
| 31 | 43.5 | | 13.0 | | 43.5 | | | | |
| 32 | 52.2 | | 13.0 | | 34.8 | | | | |
| 33 | 56.5 | | 13.0 | | 30.5 | | | | |
| 34 | 61.0 | | 13.0 | | 26.0 | | | | |
| 35 | 69.6 | | 13.0 | | 17.4 | | | | |
| 36 | 78.3 | | 13.0 | | 8.7 | | | | |
| 37 | 30.0 | none | 10.0 | none | 30.0 | 30.0 | none | none | |
| 38 | 22.5 | | 13.0 | | 45.0 | 19.5 | | | |
| 39 | 9.0 | | 14.0 | | 11.0 | 66.0 | | | |
| 40 | 85.0 | none | 15.0 | none | none | none | none | none | |
| 41 | 76.8 | none | 14.0 | none | none | none | 9.2 | none | NAPHTHA ↓ SOAP ↑ $TiO_2$ = K |
| 42 | 68.0 | | 14.0 | | | | 18.0 | | |
| 43 | 58.0 | | 14.0 | | | | 28.0 | | |
| 44 | 9.0 | | 14.0 | | | | 77.0 | | |
| 45 | 18.0 | | 6.0 | | | | 76.0 | | |
| 46 | 23.0 | none | 17.0 | none | 60.0 | none | none | none | SOAP ↑ ALCOHOL ↓ |
| 47 | 21.0 | | 16.0 | | 63.0 | | | | |
| 48 | 21.0 | | 13.0 | | 66.0 | | | | |
| 49 | 17.0 | | 14.0 | | 69.0 | | | | |
| 50 | 8.0 | none | 13.0 | none | 43.0 | none | 26.0 | none | Soap ↓ Alcohol ↓ Naphtha ↑ $TiO_2$ = K |
| 51 | 18.0 | | 13.0 | | 51.0 | | 18.0 | | |
| 52 | 18.0 | | 13.0 | | 60.0 | | 9.0 | | |

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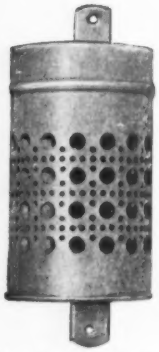
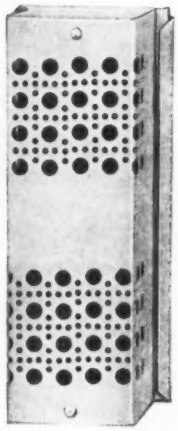
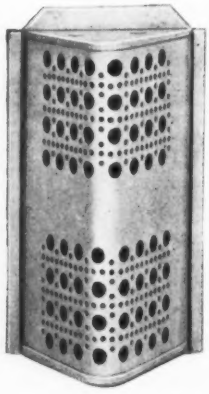


No. 1—4⅞" x 2¾"
Holds 16 oz. block
or 4—4 oz. blocks



No. 3—8" x 2½" x 2¼"
Holds 24 oz. oblong
blocks

No. 2—8⅜" x 3-3/16"
Holds 32 oz. block
or 8—4 oz. blocks



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not be evaluated by simple visual estimation, comparison with other products on the market was made as a check.

It will be noticed that the 52 experiments are separated into certain groups as follows:

A—Formulas Nos. 1 to 9 inclusive
B—Formulas Nos. 10 to 22 inclusive
C—Formulas Nos. 23 to 27 inclusive
D—Formulas Nos. 28 to 36 inclusive
E—Formulas Nos. 37 to 39 inclusive
F—Formula No. 40
G—Formulas Nos. 41 to 45 inclusive
H—Formulas Nos. 46 to 49 inclusive
I—Formulas Nos. 50 to 52 inclusive

The components of these formulas according to the table are soap solution, shellac solution, titanium dioxide, added water, denatured alcohol, carbon tetrachloride, naphtha and a colloidal or self-polishing wax solution of approximately 13 per cent solids (wax and soap) and white in color. The soap solution consisted of 1.9 per cent of a commercial chip soap, free from filler, and dissolved in a solution of water and denatured alcohol in the ratio of 55.6 per cent water to 42.5 per cent denatured alcohol. The shellac solution was made by dissolving bleached and dewaxed shellac in the presence of triethanolamine in water. The ratio used was 1.65 lbs. of shellac to each .3 lbs. of triethanolamine and 1.75 gallons of water. This ratio was evolved after numerous experiments to determine what proportions yielded the greatest amount of adhesiveness with the lowest viscosity and greatest flexibility (on leather). Triethanolamine was selected as the alkali because it yields flexible shellac films. Incidentally, where a water-resistant finish is desirable, ammonia or morpholine are also recommended although the solution described above does result in a waterproof film.

The solutions were mixed in the usual manner and before placing in their respective containers were passed through a laboratory size colloid mill. The results obtained were as follows, using the designation indicated for respective properties in the preceding paragraph.

**Group A**

The adhesivesness decreased as the shellac concentration was reduced, with an operating maximum at Formula No. 7 or approximately 30 per cent. The detergent value was greatest at an approximate concentration of 65 per cent, or also in Formula No. 7. The films deposited were flexible and white enough in effect. The appearance of the solutions in general was of a white sediment with a yellowish upper layer. They were easily shaken into solution but those formulae high in shellac content became increasingly difficult of remixture.

**Group B**

This group showed lighter-colored upper layers which were recognized as a general defect in the first group. The general detergent performance was not as high as Formula No. 7 of the first group and the solutions were much too pigmented as were the first group. The difficulty of reshaking was more marked due to the lower soap content. The adhesiveness reached a maximum in Formulas Nos. 22, 18 and 14.

**Group C**

This group showed poor adhesiveness although of the entire group Formula No. 27 was the best. The gloss available upon initial application as well as subsequent buffing was apparent, being best in Formula No. 25. The detergent value was best in Formulas Nos. 24 and 25. The appearance of all the products was marked by white or cloudy upper layers.

**Group D**

This group showed more marked cleaning or detergent properties, and appearance with the upper layer clear. Reshaking was not particularly difficult except in Formulas Nos. 28 and 29. The pigmentation on the shoe was too dense, causing heavy films.

**Group E**

This group was characterized by its high cleansing or detergent power although the solutions were too viscous for ordinary use. The suspension of the pigment was such as to make for easy and simple reshaking; but the whitening effect was still too marked although the first of the group, No. 37 seemed better than any of the preceding formulas.

**Group F**

This product had high cleansing and whitening power but was rather lacking in adhesiveness. It reshook rather easily and appeared as a sedimented liquid with a clear upper layer.

**Group G**

This group had high cleansing power but was too white in effect. The adhesiveness was nil and the appearance of the samples cloudy and rather thick. Formula No. 45 did however appear better in general whitening effect than any of the others.

**Group H-I**

These formulas appeared to have excellent detergent properties. They packed well in the container appearing as sedimented liquids with cloudy upper layers. They all appeared to be too white in effect when applied and were rather easily reshaken in the container.

As a result of these experiments and others performed on samples having an approximate pigment content of 5 per cent, a shellac content of 30 per cent, and a soap content of 65 per cent, a formula was chosen and tested in production with very good results from a standpoint of performance. This formula which is used in the description of the equipment section of this article has an approximate content similar to the optimum percentages stated and resulted in a solution, easily reshaken, of excellent adhesiveness and detergent power and white enough in effect to be able to match most if not all commercial samples against which it was tested.

## Equipment and Production

THE production methods for white shoe cleaners are equally as important in every respect as the composition. Many a good product has been produced with wide variation in properties because of improper processing. Production methods will be discussed from the standpoint of the accompanying equipment diagrams.

In general, the liquid polish kettles used should have dish-shaped bottoms where a colloid mill or pump can draw out the contents with some degree of ease. Sharp angles should be avoided in all kettles since they act as accumulation places for pigment and interfere with proper agitation. Pipelines for liquids can be smaller than those for pastes. For liquids, the lines should be kept as straight as possible and curves kept down to a minimum. The lines should never be less than 1" I.D. for

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liquids and never less than 2" I.D. for pastes. All kettles should be properly fitted with lids or covers so as to prevent excessive evaporation of the contents or hardening of the pigment.

Whenever necessary, these kettles should be cleaned with hot running water. Where soaps, alkalies, etc., are handled, the kettles should be made of steel or iron; stainless if possible to prevent discoloration by chemical action. Copper turns green on occasion and aluminum is attacked by alkalies.

Figures "A" and "B" illustrate, respectively, mixing kettles and a floor plan whereby they may be connected so as to form a complete manufacturing unit with an approximate production capacity of some 300 gallons per hour. The size and design of the equipment is based upon an actual installation and a formula containing a plasticized (flexible) shellac solution, a soap solution containing alcohol and titanium pigment as the whitening agent.

Figure "A" shows a mixing kettle equipped with an agitator set through the wall of the kettle at its lower end, and an "S-W" 2" flush bottom valve as an outlet. It should be stated, however, that a kettle of approximately the same size and shape can be operated satisfactorily with the usual type of portable agitator mounted on the upper rim of the kettle; but to eliminate as much foam as possible, the type shown in the diagram was selected.

This kettle was duplicated in three sizes, ranging from as low as 200 to as high as 400 gallons capacity. As will be seen from Fig. "B," the smallest kettle was used for the preparation of the shellac solution; the next in size was used as the main mixing kettle and the last and largest as the storage or feed kettle from which the finished product was supplied to the vacuum filling machine.

These kettles were fitted with connecting sources of hot water, steam and alcohol as is likewise indicated. Typical operation involving the preparation of an average batch of some 300 gallons was accomplished as follows: Into the shellac kettle, after closall indicated valves there was introduced exactly 165 pounds of bleached and dewaxed shellac together with 30 pounds of triethanolamine and enough boiling water to make a total of 175 gallons. This mixture was then agitated by means of the high speed stirrer and a slow stream of live steam admitted through Valve No. 1 to keep the solution boiling. This action was continued until the shellac had completely dissolved as evidenced by the formation of a clear light yellow solution. The steam was then closed and the solution stirred until cold or nearly cold.

While the shellac solution was being cooled, the soap solution was prepared in the middle or second largest kettle. With all valves closed, except those in use for the shellac kettle, 90 gallons of boiling water were admitted into the kettle by opening Valve No. 14. To this was added 31¼ pounds of a high grade commercial powdered or flaked soap (free from fillers) and the agitator turned on so as to make its solution more rapid. This solution was likewise agitated until quite cold and then 100 gallons denatured alcohol added through Valve No. 13. This solution was then thoroughly mixed and exactly 89 gallons of the cold shellac solution added by opening Valves Nos. 2 and 4 so as to permit it being pumped over. The solutions were then thoroughly combined and to the resultant mixture was added 500 pounds of Titanox A. This suspension was then thoroughly stirred for some 15 minutes and pumped into the storage kettle by opening Valve Nos. 5 and 16.

From the storage kettle, the finished product was fed to the filling machine by means of the outlet Valve No. 10 via a colloid mill from which it was filled. The overflow from the filling machine is returned to the storage tank through a pipe indicated on the diagram. The various kettles as well as the colloid mill and filling machine were cleaned as often as required by means of the hot water supply piped to each kettle. When this was necessary, and the equipment empty, water was admitted through Valves Nos. 12, 14 and 15 into the various kettles and agitated sufficiently so as to loosen any undesirable residues or foreign matter. Kettles for the preparation of the shellac and polish mixtures were emptied into the drain by keeping valves Nos. 4 and 5 closed and opening Valves Nos. 3 and 6. The storage kettle was cleaned by opening Valves No. 10 and 9 and keeping Valves Nos. 11 and 8 closed so as to allow the wash water to pass down the drain. The filling machine, colloid mill and overflow line were cleaned by closing Valve No. 7 and opening Valves Nos. 9, 11, and 8 so as to allow the hot water to circulate through the machine, mill and overflow line. It was necessary, of course, to keep bottles under the filling spouts of the filling machine so as to allow the tips to be freed from dirt, etc., as well. After the cleaning was completed, all valves were closed down so as to leave the equipment ready for the next batch.

A filter, made of stainless steel mesh, was set in the filling line between the colloid mill and the storage kettle proper so as to remove any particles of paper, wood or undissolved shellac which would eventually clog the filling spouts of the vacuum machine or injure the colloid mill. This was of the inverted "Y" type so that the screen could be slid out and cleaned without much effort. The presence of the pump between the mixing and the storage kettle aided in breaking down any undispersed aggregates of pigment and as a matter of fact made the presence of the colloid mill somewhat unnecessary.

*(To Be Concluded)*

## Disinfectant Liquid

A disinfectant liquid for use in cleaning floors as of school buildings is made by dissolving 10 parts of triethanolamine oleate in 15 parts of formalin and 15 parts of crude cresol. To this solution are added 60 parts of thin spindle oil. Before use the liquid is emulsified with 5-10 times the amount of water. *Seifensieder-Ztg.* **66,** 135 (1939).

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## U.S.P. Soft Soap

*(From Page 27)*

formula by the editor of *Soap*, and by the Secretary of the Association of American Soap and Glycerine Producers, Inc., Mr. Federline.

It is very important to reach a conclusion concerning the proposed revision, so that a revised formula may be included in the forthcoming Second U. S. P. XI Supplement. At the present time there seems to be no agreement among soap makers concerning the best oil to be used in this soap. It must be recognized that the official soap is a medicinal product and is not intended to be employed in general cleaning in the hospital. A slight reduction in the cost through the use of crude or inferior oils should not be a factor. Various samples of soap and of oils which have been submitted have been apparently of unrefined grade. This refers particularly to soy bean oil. The Pharmacopoeia would, of course, specify a refined oil if soy bean oil should be introduced.

Professor Davy believes a refined cottonseed oil, meeting the present official specifications, and with potassium hydroxide as the alkali provides the best form of Soft Soap. He has manufactured this on a relatively large scale in the Cleveland Hospitals for a number of years and it gives complete satisfaction and is free from the objectionable odor characteristic of soaps made from linseed oil. The formula he prefers is essentially the same as that official in the U. S. P., Ninth Revision.

The enclosed summary of comments is submitted with a further invitation to freely criticize the proposal and particularly to offer specific formulas or suggestions which will insure a thoroughly satisfactory official Soft Soap."

## Which Soaps Sell?

*(From Page 23)*

ing in 1937 with 15.6 per cent. "Burma Shave," which held first place during 1937 with a figure of 22.8 per cent, continued its downward trend and is now in second place at 18.7 per cent. During 1936 it was preferred by 26.6 per cent of all users. In third place this year is "Palmolive" with a consumer acceptance of 17.6 per cent as against the 12.9 per cent, fourth place figure last year. "Molle," the brushless cream in second place last year with 16.1 per cent, dropped enough to give it fourth ranking this year, being preferred by 16.0 per cent. Other preferences shown were, in order, "Koolox," "Mennen," "Kranks," "Prep," "Colgate," "Williams Glider" and "Carma," ranging from 5.7 per cent down to 1.2 per cent.

The popularity of tooth powder is steadily increasing, as may be seen from a comparison of consumer preference since 1935. In that year only 32.8 per cent of the families used this type of product. This year, however, reports show that it is preferred by 58.9 per cent of the families. Average family consumption of tooth powder has remained about the same for three years at 1.4 cans per month.

"Dr. Lyons" continues to be the choice of six out of ten users of tooth powder, having a consumer percentage of 59.1 per cent. In second place is "Pepsodent" with a popularity amounting to 7.7 per cent and in third place is "Colgate" at 6.7 per cent. Following closely are "Calox," "Revelation," "Pebeco," "Watkins," "Fuller," "Dr. West's," "Listerine" and "Zincora."

As tooth powder increased in popularity, tooth paste decreased. This year showed that only 60.8 per cent of all families used this type of tooth cleaner, as compared to 65.0 per cent reporting in 1938 and 82.1 per cent in 1935. Some of the decrease is undoubtedly due to the switch to tooth powder, but there is some possibility that the introduction of liquid dentrifrices may have also had an effect on the use of tooth paste.

"Colgate" has strengthened its hold on first place considerably, increasing its popularity from 18.8 per cent last year to 24.5 per cent this year. "Pepsodent" still holds second place in consumer preference with 17.9 per cent, while "Ipana" remains in third place at 14.9 per cent. Twelve other brands follow in preference, ranging from 8.4 per cent to 1.6 per cent.

## Shampoo Use Grows

THE use of liquid shampoo in the Greater Milwaukee market continued to grow during the past year. In 1936, 39.7 per cent of all families used this product. This increased to 47.8 per cent for 1937 and to 49.1 per cent as reported in January of this year. The average consumption of liquid shampoo per family in 1936 was 4.7 bottles annually as compared to 5.3 bottles during this past year.

"Drene" dropped from a consumer preference of 48.7 per cent in January, 1938 to one of 42.5 per cent in January of this year. It still retained a firm hold on first place, however, the nearest competitor being "Watkins" with a popularity amounting to 17.4 per cent. In third place came "Fitch's," which was preferred by 10.4 per cent of liquid shampoo users.

After maintaining a popularity of 59 per cent or better from 1936 through 1938, the percentage of users of mouth wash dropped this year to 57.7 per cent. It is not known definitely whether this is the beginning of a downward trend or just a temporary recession. The average consumption by families using this product has remained practically the same for the past four years at 1.2 bottles per month, and remains at this figure in the 1939 survey.

"Listerine" continued in first place, having a consumer preference of more than one-half of all families that used mouth wash. The actual percentage amounts to 51.6, which approximates the 51.5 per cent for 1937. "Lavoris" remained in second place with a figure of 13.2 per cent, which was also close to its 1937 figure, in this case, 13.3 per cent. "Pepsodent" dropped 2 per cent in the number of users of this brand but still held third place at 9.6 per cent. Other brands in order of preference were "Thymo-Borine," "Watkins," "Orlis" and "Mi-31."

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# News.....

### New Insecticide Plant

Central Chemical Corp., Hagerstown, Md., will soon begin operations at its new plant in Butler, Pa. Agricultural insecticides and fertilizers will be manufactured for distribution throughout western Pennsylvania.

### Flies for World's Fair

A supply of 2,500 live flies is being shipped to the World's Fair daily from the entomological laboratory of John Powell & Co., New York, for use in demonstrations and short addresses encouraging the use of household insecticides. The insecticide demonstration is part of the exhibit of E. I. du Pont de Nemours & Co. at the Fair. It comprises a modified Peet-Grady Chamber and other entomological equipment, and demonstrations in actual killing of flies are given periodically. The exhibit is in charge of Dr. M. D. Leonard, well-known entomologist.

### Ship Rats to Customers

Farm Products Co., Flat River, Mo., manufacturer of "Pied Piper Kil-Rat," a poisoned grain for the control of rats, is currently using a novel promotional campaign. Instead of sending out samples of the product, the company is shipping live, white rats to all prospects and customers.

### Wants Insecticide Agency

A firm in Cartagena, Colombia, would like to establish an agency for the sale of American made insecticides. Further information may be had by making application to the U. S. Bureau of Foreign and Domestic Commerce, referring to File No. 1307.

### J. L. Brenn in Hospital

J. L. Brenn, president of the Huntington Laboratories, Inc., Huntington, Ind., and president of the National Association of Insecticide & Disinfectant Manufacturers, was operated on for appendicitis on April 19 at the Huntington General Hospital in that city. He had been in ill-health

J. L. Brenn

for some time, resulting in the operation. He was confined to the hospital for ten days and is now convalescing at his home. He is not expected to return to his desk until the middle of the month.

### To Exhibit Larvacide

Innis, Speiden & Co., New York, will have a display featuring "Larvacide", for soil treatment, in the Gardens On Parade Exhibit in the Horticultural Building of the New York World's Fair. The booth will be in charge of C. C. Johnson of the Larvacide division of the company.

### To Hear Agicide Cube Appeal

The appeal of Agicide Laboratories, Milwaukee, in the case involving the right to use cube root as an insecticide will be heard in Chicago, May 8, in the U. S. Circuit Court of Appeals for the Seventh Circuit. The appeal seeks review of the decision of a district court which upheld the validity of the William J. Dennis patent covering the use of cube, with its fibrous material removed, as an insecticidal dust or spray. The Agicide Laboratories contend that the patent does not cover the use of ground or powdered cube root because its fibrous material has not been removed. The complainants argue that grinding or powdering destroys the fibrous character of the root, thus removing the fibrous material.

### Mrs. Henrietta Opitz Dies

Mrs. Henrietta Opitz, for many years a vice-president of John Opitz, Inc., Long Island City, insecticide manufacturers, died on March 28 at the age of 86. She was the wife of John Opitz, son of the founder of the business, and mother of three sons who are at present in active management of the firm. Her sons include Charles Opitz, present president of John Opitz, Inc., Henry Opitz, treasurer, and John Opitz, secretary. The company is one of the oldest insecticide manufacturing firms in the country and was established by John Opitz, grandfather of the present operators, in 1874 in New York. Up until recent years, Mrs. Henrietta Opitz was active in the affairs of the business.

### Monsanto Wood Preservative

Monsanto Chemical Co., Saint Louis, has announced the development of "Santophen 20", technically described as pentachlorophenol, for preservation of wood. It is said that the new product will protect wood against decay and termites. Free from objectionable odor and color, the new preservative can be applied to wood without materially alterating the wood's characteristic "feel" or appearance and without affecting subsequent finishing with paint or other surfacing.

### F.T.C. Cites Listerine

The Federal Trade Commission has issued a complaint against Lambert Pharmacal Co., St. Louis, charging the company with violation of the Robinson-Patman Act in connection with the sale of "Listerine" and allied products. The complaint

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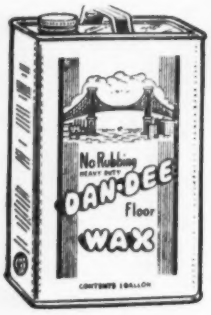


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states that the company allows rebates to certain "favored customers," in addition to regular trade discounts granted to all customers. Such "favored customers" in turn furnish the company with advertising, selling or warehousing facilities the complaint states. In order to obtain the rebates, the "favored wholesaler" must place a minimum monthly order for $50 of Lambert products, and the "favored retailer" a minimum monthly order of $36.

♦

### Wants Insecticide Agency

A firm in Thessalonika, Greece, is interested in establishing an agency for the sale of American manufactured insecticides. Full details may be had by writing to the U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C., referring to File No. 1387.

♦

### Sevison Heads Two Companies

F. M. Sevison, who has been identified with the soap, wax and disinfectant business since 1931, is active in the management of Empire Chemical Products Co., Newark, N. J., manufacturers of floor products. Mr. Sevison also continues as the owner of a subsidiary, Empire Products Co., Allentown, Pa.

♦

### U. S. Wax Imports

The United States, world's largest consumer of animal and vegetable waxes, imported 26,500,000 pounds in 1937, valued at $7,500,000, according to a bulletin recently issued by the Bureau of Foreign and Domestic Commerce. This figure is about three times as much as the United Kingdom, the world's second largest consumer. Imports of carnauba wax, the bulk of which is used in the production of furniture, shoe and other polishes, accounted for 14,000,000 pounds of the total.

♦

### New Plant For Drackett Co.

Drackett Co., chemical specialty manufacturer, Cincinnati, has recently acquired some 70 acres in Sharonville, a suburb, where the company plans the construction of a large new plant.

### Pass Maryland Insecticide Law

The Maryland State Legislature has just passed a bill requiring registration with the State Board of Agriculture of all agricultural insecticides and fungicides sold within the state. A fee of $5.00 is assessed for each brand each calendar year, with a maximum yearly payment of $75.00. Household fly sprays and other household insecticides are excluded from application of the new measure, but such products as cattle sprays and dips, household garden sprays, weed killers, rodenticides and disinfectants used for agricultural purposes will come within its scope. Passage of the bill was strenuously opposed by the legislative committee of the National Assn. of Insecticide & Disinfectant Mfrs.

♦

### N. Y. Exterminators Meet

The Associated Exterminators & Fumigators of New York held a meeting April 18, at 7 East 44th Street, New York. Kenneth Harder, Harder Exterminating Co., Hempstead, L. I., spoke on the subject "Termites," following which was a general discussion of various phases of termite control work. President Buettner spoke on the progress being made in arranging for the convention of the National Pest Control Association to be held in New York next October. Chairmen of the various committees of the New York association are: Justin Simon, finance; Eugene H. Sameth, health department and legislation; William J. Shrimplin, ethics and fair trade practices; Murray Gladstone, membership; J. J. Hess, publicity; Col. L. Philipp, constitution and by-laws, and E. J. Jennings, advertising code and N. Y. Better Business Bureau.

♦

### Syracuse Passes Ordinance

The Syracuse City Council recently passed the disputed ordinance regulating fumigating, disinfecting and exterminating. The ordinance had been opposed by William J. Wolfson, head of the National Disinfecting Co., Syracuse, on the grounds that it had been drawn up by people who knew nothing of that type of work. Those who supported the ordinance were Leonard Goulet, Reliable Exterminator Co. and R. B. Cancross, Syracuse Chemical Co., who characterized the ordinance as "fair and workable."

♦

### World's Fair Towels Contract

Scott Paper Co., Chester, Pa., was recently awarded the contract to supply "ScotTissue" towels for use in all World's Fair operated washrooms. "ScotTissue" will be supplied for all the toilets in these washrooms. In free toilets "ScotTissue" towels will be dispensed from a vending machine, and will be packaged in a red and blue glassine envelope.

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*is an excellent substitute for*

OLIVE OIL and OLIVE OIL FOOTS

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**OIL PRODUCTS CO.**

INCORPORATED

21 WEST ST., NEW YORK

## HIGH GRADE CRESYLIC ACID

SPECIAL FRACTIONS

215/230°

230/260°

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HIGH BOILING

TAR ACIDS

TO GIVE RIDEAL-WALKER

COEFFICIENT 25/28

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WHITE EMULSION

TAR ACID CREOSOTE

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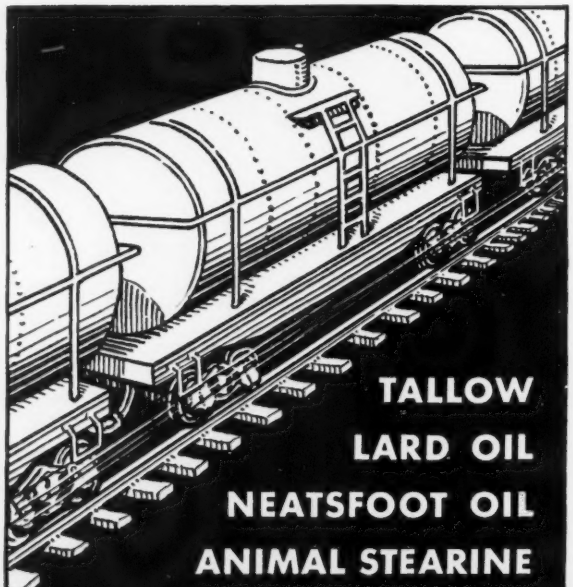
**MIRVALE CHEMICAL CO., Ltd.**

MIRFIELD YORKS, ENG.



**TALLOW**

**LARD OIL**

**NEATSFOOT OIL**

**ANIMAL STEARINE**

**ACIDLESS TALLOW OIL**

Prompt Delivery—Drums, Barrels, or Tank Cars.

**INDEPENDENT MANUFACTURING CO.**

Bridesburg P. O. Philadelphia, Pa.

### List Insecticide Laws

A list of current state insecticide laws covering registration, fees and other general requirements has been issued by the National Association of Insecticide & Disinfectant Manufacturers to its members. The list shows thirty states with insecticide requirements of some kind and fees ranging from $2 all the way up to $125 for registration, the latter required by Florida. The list includes with two latest state laws, Maryland with $5 per brand registration fee and North Carolina with $10. Copies are not available.

### Wrong—Entomologically!

Criticizing the editorial on the W.P.A. work against the Japanese beetle in the St. Louis area which was published in the April issue of *Soap & Sanitary Chemicals*, Dr. Warren Moore, consulting entomologist of Bon Air, Virginia, has written as follows:

"You imply the same entomological fallacy which gave us the gypsy moth. The elimination of the Japanese beetle focus at St. Louis is an excellent and important accomplishment. An account of it will be found in the Journal of Economic Entomology, v.31, No. 5, p. 590 (October 1938). In work of this kind, it is essential that *every* insect of the species be destroyed."

### Lewis' Lye Stipulation

Pennsylvania Salt Manufacturing Co., Philadelphia, has advised the Federal Trade Commission that it will no longer use misleading representations in the sale of its product "Lewis' Lye." The company had claimed that its product would kill worm eggs, germs and bacteria, act as a "general conditioner" when fed to hogs, and control hog mange. They also stated that the product was six times as strong as carbolic acid and was the "original economical" water softener.

### Guatemala Polish Industry

A few small plants in Guatemala, manufacturing various types of polish, take care of domestic polish needs in that country. These firms also utilize beeswax of domestic origin in the preparation of floor wax. The demand for automobile polishes in that country is fairly constant, whereas furniture and floor polishes are not used in any great volume. The limited use of floor wax polishes is probably due to the wide use of tile floors.

**Mixing—Uniform or Otherwise?**

**Correct and complete mixing in the manufacture of chemical specialties, insecticides, cleansers, etc., appears off-hand to be a simple process,—but is it as simple as it looks? A short discussion of mechanical mixing with illustrations of proper types of equipment for various operations in the next issue of *Soap & Sanitary Chemicals* by C. R. Lockard. Have you a mixing problem? Read it.**

### Lambert Earnings Up

Lambert Pharmacal Co., St. Louis, reported a net income of $433,443, equal to 58 cents a capital share for the quarter ended March 31, 1939. For the same quarter in 1938 the net income amounted to $390,001, equal to 52 cents a share.

### New House Organ For Dreyer

P. R. Dreyer Inc., New York, is publishing a new house organ *Dreyer-Log*, which is issued every month. Features in the March issue were "Markets and Views as I See Them" by Charles Fischbeck; an article on "fixing" perfumes by George H. Zirkel, and a "Question Corner."

### Name New Anchor Sales Mgr.

R. Bruce MacFarlane has just been appointed sales manager of the Anchor Cap and Closure Corp., Long Island City, N. Y., which is the closure division of the Anchor Hocking Glass Corp. He joined the company in the early part of 1938, and since that time, has served as home office representative.

### Check "Death Ray" Claims

Jackman & Co., Brooklyn, makers of "The Death Ray Lantern," have signed a Federal Trade Commission stipulation agreeing that they will no longer make direct or implied representations that the lantern's light will attract insects in sufficient numbers to make it valuable, that all insects will be electrocuted upon contact with the charged wire, or that their destruction is due solely to such electrocution.

### Malaya Polish Imports Up

Floor polish imports into British Malaya in 1938 were valued at $40,730, an increase over imports valued at $33,103 in 1937. The most popular polish in the British Malayan market is said to be one produced by an American subsidiary which has a factory in the United Kingdom. It is believed that direct imports from the United States could be increased if they were more extensively advertised.

### Owens-Illinois Promotions

F. J. Solon was recently made vice-president and general sales manager of the Owens-Illinois Glass Co., Toledo, and F. T. Nesbitt was made vice-president of the same company in addition to being appointed vice-president and general manager of the Owens-Illinois Can Co. J. P. Levis is the new president of the Can company

### Armstrong Joins Universal

J. C. Armstrong, sales manager of Lowell Mfg. Co., Lowell, Mich., for the past five years, has just joined Universal Metal Products Co., Saranac, Mich., in the same capacity.

### Dade Chemical Moves

Dade Chemical Co., sanitary chemicals and janitor supplies, has opened offices and sales rooms at 1111 16th Street, Miami Beach, Fla.

Javelle Chemical Co., 14 Essex St., Bangor, Me., is a new producer of liquid bleach. The plant is in charge of Leo J. Belanger, Jr.

## HOCKWALD'S DISPENSERS

**No. 1 Wall Type** **No. 2 Basin Type**

All parts replaceable including glass globes. Can be disassembled in two minutes without mechanical skill, yet when in operation it is securely locked together. No cement or plastics used in any part of the machine.

*WRITE FOR DESCRIPTIVE LITERATURE AND PRICES*

**Hockwald Chemical Company**

135 Mississippi Street
San Francisco, Cal.

LARGEST PACIFIC COAST MFR. OF POTASH SOAPS AND SANITARY PRODUCTS

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# *Bulk*

Shampoo Bases
Liquid Soap Base
Green Soft Soaps

Liquid Shampoos
Liquid Toilet Soaps
Scrubbing Soaps

*For Repacking and Jobbing 55 years' experience assures satisfaction.*

**GEO. A. SCHMIDT CO.**
INCORPORATED
*Manufacturers of* SOAPS *of Every Description*
236-238 West North Avenue
Chicago

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## LAUNDRY CHEMISTRY

**2nd Edition**

*by*

**A. HARVEY, F.C.S.**

A practical book dealing with basic principles of laundry chemistry. Of use to the supplier of laundry materials as well as to the laundry operator. Typical chapter headings follow:

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| ACIDS, ALKALIS AND SALTS | BLUES AND BLUEING |
| WATER | STARCHES |
| OILS AND FATS | TEXTILE FIBERS |
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| BLEACHING AGENTS | PEROXIDES |

**$1.75 per copy**

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254 WEST 31st STREET NEW YORK CITY

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SOAP

DISINFECTANTS
PINE OIL COAL TAR
CRESOL
COMPOUNDS

SOAPS
LIQUID CLEAR BASE
POTASH OIL POWDERED
ALCOHOL (U.S.P.)

FLOOR
WAXES CLEANERS
SCRUBS
SOAP —— POWDERS

**PECK'S PRODUCTS COMPANY**
KANSAS CITY ST. LOUIS, MO. NEW YORK

# Dr. Thomssen Reports on Europe

DR. E. G. THOMSSEN, technical director of the J. R. Watkins Co., Winona, Minn., accompanied by Mrs. Thomssen, arrived in New York on April 20 aboard the "Queen Mary" after a five months stay in Europe. Most of their time was spent in England where Dr. Thomssen supervised the equipping and initial operation of the new Watkins plant at Birmingham where 150 products of the Watkins line are now being manufactured. Director of the new British branch is W. R. Purnell, formerly manager of the Watkins Montreal branch. Alec G. Willsmer, formerly with Skuse & Co., London, is plant superintendent, and Albert J. Temple, formerly of the Watkins Winnipeg branch, is chief chemist. During his stay in England, Dr. Thomssen also supervised the establishment of 14 Watkins distribution depots throughout the British Isles.

While in Europe, the Thomssens also spent considerable time travelling about the Continent. In reporting on conditions abroad, Dr. Thomssen stated that the British Isles were prosperous with little unemployment and skilled labor at a premium. Some part of this industrial prosperity, he stated, was undoubtedly due to the rearmament program. He also said that American soapers are making a very pronounced dent in the British market and are pushing hard for business.

He saw but little in the way of common use of sanitary chemicals, such as insecticides, etc., noting that the Britishers are not nearly as insect and sanitation conscious as are Americans. He also pointed out that due to much industrial activity, it is quite difficult at the present time to purchase machinery and equipment in England and hope for any kind of prompt delivery.

On the Continent, he was impressed by the feverish industrial activity in Germany and a shortage of all kinds of labor. It seemed to him, however, that the Germans were

Dr. E. G. Thomssen

not spending money in spite of heavy payrolls.

Asked about the quality of German soaps, he said that as far as he could note, they were of very good quality. He also mentioned the wide improvement in sanitary conditions throughout the Reich. In France, he stated, sanitation and the use of sanitary products are still conspicuous by their absence, although general conditions are improving. For Italy, he reported much improved internal conditions both from the angle of industry, sanitation and general living conditions.

Among the outstanding events of their stay abroad, said Dr. Thomssen, was attendance at the Grand National Steeplechase in England. The visit was crowned by Mrs. Thomssen, in spite of advice to the contrary, picking "Workman," the winning horse, and placing an independent bet "on his nose." When he galloped home a winner at 11 to 1, it is reported that Mrs. Thomssen had considerable to say about the horse-picking ability of the other members of the party, including one E. G. Thomssen.

After a short stay in New York and at the Newark plant of Watkins, the Thomssens returned to their home at Winona, Minn. on April 24.

♦

## ADMA Convention Committees

The general entertainment committee for the 28th annual meeting of the American Drug Manufacturers Association is composed of V. E. Williams, Monsanto Chemical Co., chairman, and W. D. Barry, Mallinckrodt Chemical Works, vice-chairman. The subcommittees for the meeting, to be held at The Homestead, Hot Spring, Va., May 1-4, are as follows: Banquet: F. J. McDonough, New York Quinine & Chemical Works, chairman; M. N. DeNoyelles, Chas. Pfizer & Co.; Evening Entertainment: W. D. Barry, chairman; J. P. Remensnyder, Heyden Chemical Corp.; Golf Tournament: Herman J. Dietel, Merck & Co., chairman; J. P. Remensnyder; James C. Chilcott, The Maltine Co.; Ladies Events: A. A. Wassercheid, Mallinckrodt Chemical Works, chairman; George Simon, Heyden Chemical Corp., James T. Pardee, Dow Chemical Co., B. F. Zimmer, Fritzsche Bros.; Publicity: Gerald S. Furman, Merck & Co.; Tennis Tournament: S. Barksdale Penick, Jr., S. B. Penick & Co., chairman; Gerald S. Furman; Transportation: Robert B. Magnus, Magnus, Mabee & Reynard, Inc.

♦

## Wants Polish Agency

A firm in Winnipeg, Canada, is interested in establishing an agency for the sale of American manufactured silver and stove polishes. Further details may be had by writing to the U. S. Bureau of Foreign and Domestic Commerce, referring to File No. 1138.

♦

## Hercules Moves N. Y. Office

Hercules Powder Co., Wilmington, has moved its New York office to 500 Fifth Avenue. W. M. Annette is in charge; Rex St. Clair is manager of explosives sales, and G. C. O'Brien will continue as manager of naval stores sales and as supervisor of general office activities.

2 NEW—*Outstanding*

SCIENTIFICALLY TESTED—
WATERPROOF • SELF-POLISHING

# FLOOR WAXES

**Now available for the JANITOR SUPPLY and JOBBING TRADE.**

- **Made right—for profitable business — can be had in bulk or in containers — under your own private brand**
- Let us prove our statements regarding these two "best seller" grades. Write for free samples or for demonstration.

**Empire Chemical Products Co.**
12 LONGWORTH STREET NEWARK, N. J.

WE ALSO MANUFACTURE

Liquid Floor Soaps
Rug Shampoo
Metal Polish
Disinfectants
Gym-Finish
Paste Wax

**If you manufacture products containing alcohol**

*Write us about*

# TONKAIRE

***A new synthetic specialty which eliminates the sharp odor of alcohol***

***We shall be pleased to forward a sample and full information***

**COMPAGNIE PARENTO, Inc.**
Croton-on-Hudson New York

# F. & S.

## Quality Colors *for* TOILET SOAPS LIQUID SOAPS

**TOILET PREPARATIONS**

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

**FEZANDIE & SPERRLE, Inc.**
205 FULTON STREET
NEW YORK, N Y.
*Import—Manufacture—Export*

We announce development of new type soap colors

# PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

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| Bright Green | Dark Brown |
| Olive Green | Palm Green |
| Yellow | Golden Brown |
| True Blue | Violet |

***It will pay you to send for testing samples.***

**PYLAM PRODUCTS CO., INC.**
*Manufacturing Chemists, Importers, Exporters*
799 Greenwich St. New York City
*Cable Address: "Pylamco"*

# Labeling and Legislation Head Insecticide and Disinfectant Program

CURRENT labeling problems and their discussion will hold a prominent position on the program of the 26th annual mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers to be held at the Hotel Biltmore, New York on June 5 and 6. An address on "Labeling Problems of the Industry" by Dr. H. C. Fuller, technical consultant of the Association will be followed by a question and answer clinic on label revision, and new label requirements under the Federal Food, Drug and Cosmetic Act which goes into effect June 25, and their relation to labeling of insecticides and disinfectants under the Insecticide Act of 1910. New state laws on insecticides, disinfectants, and allied products, and pending legislation will be discussed by C. L. Fardwell of McCormick & Co., Baltimore, chairman of the Association legislative committee. J. O. Peckham of the A. C. Nielson Co., New York, will speak on "Continuous Marketing Research." There will be several papers by well-known authorities on technical subjects, including insecticide testing, floor finishes, and industrial disinfectants. Insecticide marketing,

*BILL ZICK of Stanco*
*. . . heads convention committee*

products liability insurance, public purchases, and other subjects will come in for the attention of committee reports.

Floor finishes from the angle of the flooring manufacturer will be discussed by A. H. Singler, secretary of the Maple Flooring Manufacturers' Association. Dr. Cecil Dunne of Massachusetts Institute of Technology will discuss the "Value of Commercial Disinfectants in Time of Emergencies." Melvin Fuld of Fuld Brothers, Baltimore, will report on preliminary work leading to the testing and standardization of floor waxes. Dr. F. L. Campbell of Ohio State University will report on the fellowship of the Association there, the report of his department this year covering tests against bedbugs. Dr. Walter Eddy of Good Housekeeping Institute will discuss the subject of the public's reaction to advertising and its effect on purchasing, particularly in the case of household insecticides.

"Products Liability Insurance,"—results of an investigation on this subject will be presented by R. O. Cowin of the Standard Oil Co. of Ohio, Cleveland, and Charles Opitz of John Opitz, Inc., New York. Gordon Baird of Baird & McGuire, Inc., Holbrook, Mass., will report on difficulties with agencies controlling public purchases, particularly faulty bidding requirements. Papers on insecticide testing will be heard by W. N. Sullivan and E. R. McGovran of the Bureau of Entomology & Plant Quarantine, U.S.D.A. J. T. Godoy of W. R. Grace & Co., New York, will speak on "Carnauba Wax,—Its Quality and Grading." Dr. Alfred Weed of John Powell & Co. will report for the Insecticide Scientific Committee, H. A. Thomas of Shell Oil Co., St.

*JOHN POWELL of Powell*
*. . . holds the purse strings*

*CLARENCE WEIRICH of Dolge*
*. . . in charge of program*

*LARRY LaCAVA of Continental*
*. . . boss of the fan dancers*

## The HOLZ-EM SOLVES the PROBLEM

of convenient and proper application of floor waxes, seals and varnishes. You can be sure that your products are being used correctly by selling or recommending the HOLZ-EM WAX APPLICATOR and SPREADER to do the job. Designed by experts, made of the best materials, the HOLZ-EM will help build your list of satisfied customers just as it has done for others who are already familiar with the product.

We manufacture a complete line of wool applicators, cotton dust mops and cotton wet mops. For prices and samples write

**AMERICAN STANDARD MFG. CO.**
2509-13 South Green Street Chicago, Ill.

## A new floor wax

for the janitor supply and jobbing trades which is

## *waterproof*

and which gives a

## *high gloss*

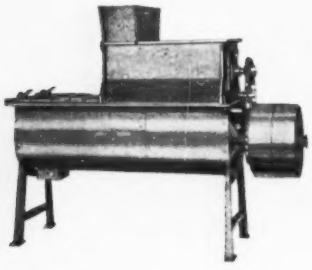
≫

## ZIP-ON WAX

Dries very bright and becomes water resistant as soon as dry. Wax content guaranteed 100% Carnauba. Supplied in bulk, or with your label in any size container.

**Shawmut Specialty Co.**
91 Bickford St. Boston

## FOR MIXING



Sweeping Compounds — Deodorant Crystals — Insecticides —

**This small Sprout-Waldron power mixer meets requirements perfectly. It is furnished with or without sifter attachment. Sizes range from 2½ to 15 cubic feet, with ¾ to 3 horsepower requirements.** *Write for Catalog*

**SPROUT, WALDRON & COMPANY**
Dept. 3 Muncy, Pa.

Louis, for the Insecticide Marketing Committee, and Wallace Thomas of the Gulf Refining Co., Pittsburgh, for the committee on cooperative advertising.

The meeting will open at 9:00 A.M. on Monday, June 5, and will close with an informal cocktail party and dinner on Tuesday evening, June 6. Group luncheons will be held daily during the meeting. A meeting of the Board of Governors will be held on Sunday evening, June 4, preceding the convention. The general convention committee is headed by W. J. Zick of Stanco, Inc., New York. John Powell of John Powell & Co., New York, is in charge of arrangements and finances. The program is in charge of Clarence L. Weirich of the C. B. Dolge Co., Westport, Conn. The banquet entertainment committee is made up of L. J. LaCava of the Continental Can Co., Joseph B. Magnus of Magnus, Mabee & Reynard, Inc., and Charles Opitz of John Opitz, Inc. Activities in connection with the World's Fair, including transportation there for members and guests, are in charge of Louis Trevisan of the American Can Co. and W. J. Bjork of L. Sonneborn Sons, Inc.

◆

## New England P.C.A. Meets

The New England Pest Control Association recently held its monthly meeting at the Hotel Lenox, Boston. After a brief business meeting, Dr. Charles H. Blake of the New England Museum of Natural History, presented an illustrated lecture on "Insects Attacking Wood." Irving Sameth, president of the national association, told of the plans for the Seventh Annual Convention to be held at the Hotel Pennsylvania, New York, Oct. 23, 24, and 25. The final speaker of the evening was William O. Buettner, secretary of the national association, who reported on conditions observed throughout the country on his recent trip to the west coast.

◆

A. B. C., Inc., fumigators and exterminators, East Orange, N. J., have recently moved to other quarters at 225 Central Ave., that city.

## Professional Exterminators Meet

The Professional Exterminators Association held a meeting at Town Hall, New York, March 30. Speakers for the evening were Dr. Chapman, American Cyanamid & Chemical Corp., and W. J. Haude, entomologist for John Powell & Co., who covered the topic "Modern Bed Bug Liquids." The meeting was later opened to general discussion, questions and answers.

◆

William Berens Co., soap, waxes, insecticides, New Rochelle, N. Y., has recently moved to larger quarters at 25 Avenue E, that city.

## Powell Lands Another Fish

John Powell of John Powell & Co., New York, joined the elect among deep-sea fishermen early last month off the coast of Palm Beach, Florida, by hooking and landing an eight-foot sailfish. Mr. Powell, who heretofore confined his efforts to smaller fry in the fish world having won quite a reputation in certain Canadian waters as an angler, required over an hour to bring his prize catch to the side of the boat. Reports from Palm Beach stated that Mr. Powell hooked the fish in the tail by error and only his unusual angling skill and his prodigious strength made it possible for him to bring the fish to boat. He is having the fish stuffed for posterity.

## Special Offerings of

*New and Rebuilt*

# SOAP MACHINERY

*by*

# NEWMAN

We carry a complete line of equipment for the soap and sanitary products industry. All used equipment is rebuilt in our own shops and is guaranteed to be in first class condition. All new equipment that we manufacture such as crutchers, frames and cutting tables is of the finest material and workmanship. You can buy with confidence from Newman.

### *USED SPECIALS*

### *For the Soap, Chemical, Cosmetic and Allied Trades*

- H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
- Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
- Empire State, Dopp & Crosby Foot Presses.
- 2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
- H-A 4 and 5 roll Steel Mills.
- H-A Automatic and Hand-Power slabbers.
- Proctor & Schwartz Bar Soap Dryers.
- Blanchard No. 10-A and No. 14 Soap Powder Mills.
- J. H. Day Jaw Soap Crusher.
- H-A 6, 8 and 10 inch Single Screw Plodders.
- Allbright-Nell 10 inch Plodders.
- Filling and Weighing Machine for Flakes, Powders, etc.
- Steel Soap frames, all sizes.
- Steam Jacketed Soap Remelters.
- Automatic Soap Wrapping Machines.
- Glycerin Evaporators, Pumps.
- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
- Perrin 18 inch Filter Press with Jacketed Plates.
- Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
- Day Grinding and Sifting Machinery.
- Schultz-O'Neill Mills.
- Day Pony Mixers.
- Gardiner Sifter and Mixer.
- Proctor & Schwartz large roll Soap Chip Dryers complete.
- Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.
- Day Talcum Powder Mixers.
- All types and sizes—Tanks and Kettles.
- Ralston and H-A Automatic Cutting Tables.
- Soap Dies for Foot and Automatic Presses.
- Broughton Soap Powder Mixers.
- Williams Crutcher and Pulverizer.
- National Filling and Weighing Machines.

*Send us a list of your surplus equipment— we buy separate units or complete plants.*

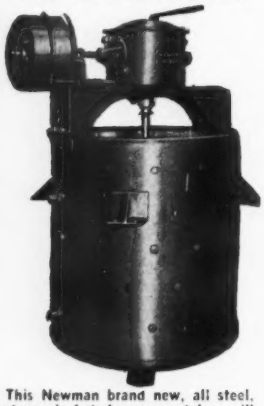
## Newman Tallow & Soap Machinery Co.

***1051 W. 35th St., Chicago, Illinois***

Phone: Yards 3665-3666

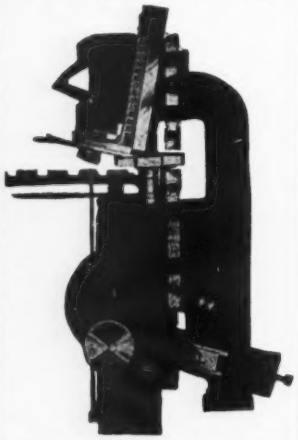
*Our forty years soap experience can help solve your problems.*

### *New* CRUTCHERS



This Newman brand new, all steel, steam jacketed soap crutcher will crutch any kind of soap. We also build another crutcher especially adapted for laundry soap.

### *Automatic* JONES PRESS

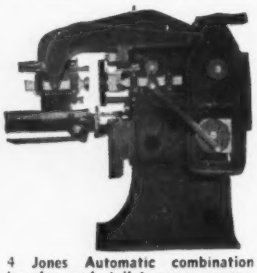


Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our shops.

### H-A SOAP MILL

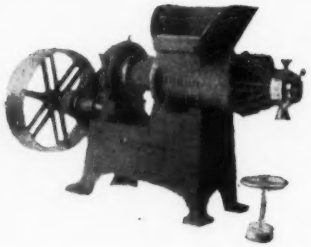
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls. Priced for quick sale.

### JONES AUTOMATIC



4 Jones Automatic combination laundry and toilet soap presses. All complete and in perfect condition.

### SINGLE SCREW SOAP PLODDER



Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.

# Classified Advertising

**Classified Advertising**—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number. care of *Soap*, 254 West 31st St., New York.

## Positions Wanted

**Experienced Soap Maker** wishes to make permanent connection. Able to manufacture Neutral Liquid Soap (without doctoring), also insecticide non-rubbing wax, prepared liquid and paste waxes, metal polishes, etc. Address Box No. 603, care *Soap*.

**Superintendent and Soap Chemist:** Specialist in all type potash and liquid soaps. 14 years experience. Can guarantee his results. Desires connection on Pacific seaboard. Address Box No. 598 care of *Soap*.

**Industrial Soaps:** Man with ten years successful sales record in industrial soaps in east desires to make new connection represent manufacturer willing to establish eastern branch, warehouse, etc. Can produce the business. Interested only in sizable proposition. Address Box No. 611, care of *Soap*.

**Experienced Soap Maker** is looking for steady position. Address reply to Box No. 610, care of *Soap*.

**Salesman:** Followed the Sanitary Field for the past 10 years covering most of the states east of the Mississippi River, catering to the following trades:—janitor supplies; bar; restaurant; paper and chemical jobbers;—have following. Would consider salary or drawing account. Working at present but desirous of permanent connection with a reputable house. Address Box No. 595, care of *Soap*.

**Soap Maker**—Man with fifteen years experience in manufacture of toilet soaps, soap powders, etc., the past year in American plant, previous experience in Germany, desires new position. Chemical graduate. Can take charge of plant. Best references. Moderate salary. Box No. 613, care *Soap*.

**Soap Maker:** More than ten years experience, laundry, household, toilet soaps, flakes, powders, floor wax, shoe polish. Address Box No. 612, care of *Soap*.

**Salesman:** Soap chemist well versed in the manufacture and sale of industrial soaps and institutional cleaners is interested in connection in Southern California. Present employment in middle-west requiring 4 month notice. Address Box No. 599, care of *Soap*.


## FAIR TO YOUR BUDGET

**The World's Fair to New Yorkers and All the World. Consolidated, too—is Fair to budget minded plant executives. For fair values in Guaranteed Good Rebuilt Equipment see "Consolidated."**

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| Crutchers | Pulverizers |
| Soap Kettles | Soap Pumps |
| Powder Mixers | Soap Chippers |
| Granite Mills | Filter Presses |
| Plodders | Soap Frames |
| Slabbers | Powder Fillers |
| Foot and Automatic Soap Presses | Labellers |
| Cutting Tables | Tanks |
| | Boilers |

**Selected Specials**

2—Proctor & Schwartz Soap Chip Dryers, steel frame; 1 with single roll mill.
2—Blanchard No. 10 Soap Powder Mills.
4—Steel Wool Mfg. Machines, complete.
3—Automatic Soap Wrapping Machines, electric glue sealers, adjustable.
1—Jones automatic Soap Press.
2—Pneumatic Scale Carton Packaging Units.
3—Rotex sifters, 20″x48″ screens, single deck.

**Send for Winter Issue "Consolidated News"*

CONSOLIDATED PRODUCTS CO., INC.
15-21 PARK ROW — NEW YORK, N. Y.
BArclay 7-0600 — Cable Address: Equipment
*We buy your idle Machinery—Send us a list.*

## Plain Talk --

We repeat there is no one type of wax that gives the best results under all conditions on every type* of flooring.

That's why . . . WINDSOR manufactures floor wax to meet SPECIAL as well as REGULAR requirements.

For fine wood floors we recommend WINDSOR Paste Wax No. 50 . . . A smooth, easy spreading wax paste that brings out the beauty of the wood . . . Contains a high percentage of solid contents with a refined Carnauba Wax base.

WINDSOR WAX CO., INC.
53 PARK PLACE, NEW YORK

**Beautiful wood floors are best maintained with Paste Wax . . . Use WINDSOR No. 50.*

**Salesman**—Young man with several years' experience in the petroleum field desires new connection in sales work for manufacturer of soaps or sanitary specialties where there is a good future. For further details communicate with Box No. 618, care of *Soap.*

**Chemist, Ph.D.**—Thorough chemical and engineering training. Twelve years executive duties. Extensive experience with disinfectants, antiseptics, detergents, and insecticides. Interested in development and production. Address Box No. 619, care *Soap.*

## Positions Open

**Chemist:** Large Eastern Manufacturer of Sanitary Chemicals has opening for chemist with experience in disinfectants, polishes, waxes, etc. for control and development. Expenses paid for interview. Write stating experience, salary expected, age. Address Box 617, care *Soap.*

**Salesmen:** We are seeking a few high type salesmen calling on towel supply, hotel ship supply people, to sell towel supply and guest soaps. Prices and quality good. State present line and territory covered. Address Box No. 614, care of *Soap.*

**Salesman:** Experienced, with car and a following, selling bulk sanitation and floor treatment chemicals to hospitals, hotels, industries, schools, public buildings, etc. Commission income, permanent position, several new territories. Write fully. Address Box No. 597, care of *Soap.*

**Sales Manager:** Liquid soap, selling bulk to churches, institutions, etc. Drawing and commission. Young company, bright future for the right man. Write fully. Box No. 616, care *Soap.*

## Miscellaneous

**Sales Representative:** Cincinnati firm would be interested in representing producers of raw materials used by soap manufacturers. Address Box No. 602, care of *Soap.*

**Guaranteed Rebuilt Equipment for Every Need:** Soap presses, frames, slabbers, plodders, chip dryers, mills, powder disintegrators, crutchers, filter presses powder mixers, all type of mixers, pulverizers, oil expellers, glycerine evaporator, rotary syphon fillers, cartoning and wrapping machines, labelers, pony mixers, tube filler, boilers, pump, compressors, tanks, and kettles. First Machinery Corp., 419 Lafayette St., New York, N. Y.


*Do You Have Your*

**PROFIT GUIDE?**

**CHEMICAL SUPPLY CO.'S**

***NEW***

**PRICE LIST AND CATALOG**

•

**Write for your copy NOW. Find out why jobbers of Sanitary Supplies use this as their "bible" for greater profits.**

**It's chuck full of interesting products—at prices that enable you to buy economically.**

*We'll be glad to send your copy.*

•

**THE CHEMICAL SUPPLY CO.**

**2450 CANAL ROAD** **CLEVELAND, O.**


**Complete Soap Plant Equipment for Sale:** Proctor soap chip dryer; automatic soap press; wrapping machine; 4 roll stone mills; foot press; plodders 6", 8", 10"; soap boiling kettles; 6 knife chipper; two-way cutting table; frames; filter presses; crutchers; mixers; boilers. Stein Equipment Corp., 426 Broome St., New York City.

**Floor Brushes**—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

**Wanted** to purchase or preferably to rent an existing small soap plant. Toilet, laundry soaps, soap powder. Address reply to Box No. 609, care of *Soap.*

**Wanted: Soap** Plodder and Steel Roll Mill, state size, price, and condition. Address Box No. 600, care of *Soap.*

**Business Wanted:** Interested in purchasing small business together with all equipment. Interested in products selling through grocery and drug trades. Give details to Manufacturer Box No. 620, care of *Soap.*

# Raw Materials and Equipment

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index of Advertisements, on page 136 for page numbers. *"Say you saw it in SOAP."*

## ALKALIES

American Cyanamid & Chemical Corp.
John A. Chew, Inc.
Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

## BULK AND PRIVATE BRAND PRODUCTS

Associated Chemists, Inc. (Insecticides)
Baird & McGuire, Inc. (Disinfectants)
Buckingham Wax Corp. (Wax Products)
Candy & Co. (Floor Products)
Chemical Supply Co. (Disinfectants, etc.)
Clifton Chemical Co. (Sanitary Supplies)
Davies-Young Soap Co. (Potash Soaps)
Empire Chem. Prods. Co. (Sanitary Supplies)
Federal Varnish Co. (Floor Products)
Fuld Bros. (Sanitary Supplies)
Harley Soap Co. (Soap Specialties)
Hockwald Chemical Co.
R. M. Hollingshead Corp. (Floor Products)
Hysan Products Co. (Sanitary Supplies)
Koppers Co. (Disinfectants)
Kranich Soap Co. (Potash Soaps)
Peck's Products Co. (Sanitary Supplies)
Philadelphia Quartz Co. (Detergents)
Geo. A. Schmidt & Co. (Soaps)
Shawmut Specialty Co. (Wax Products)
Sweeping Compound Mnfrs. of N. Y. (Floor Products)
Twi-Laq Chemical Co. (Wax Products)
Twin City Shellac Co. (Wax Products)
Uncle Sam Chemical Co. (Sanitary Supplies)
T. F. Washburn Co. (Floor Products)
White Tar Co. (Disinfectants, etc.)
Windsor Wax Co. (Wax Products)

## CHEMICALS

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
John A. Chew, Inc.
Columbia Alkali Co.
Diamond Alkali Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
General Dyestuffs Corp.
Hooker Electrochemical Co.
Industrial Chemical Sales Div.
Innis, Speiden & Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

## COAL TAR RAW MATERIALS

**(Cresylic Acid, Tar Acid Oil, etc.)**

American-British Chemical Supplies
American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Innis, Speiden & Co.
Koppers Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

## COLORS

Fezandie & Sperrle
Pylam Products Co.

## CONTAINERS and CLOSURES

American Can Co. (Tin Cans and Steel Pails)
Anchor-Hocking Glass Corp. (Closures & Bottles)
Continental Can Co. (Tin Cans)
National Can Co. (Cans)
Owens-Illinois Glass Co. (Bottles & Closures)
Wilson & Bennett Mfg. Co. (Steel Pails and Drums)

## DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.
National Sanitary Chemical Co.

## INSECTICIDES, SYNTHETIC

American Cyanamid & Chemical Corp.
Rohm & Haas Co.
Whitmire Research Corp.

## MACHINERY

Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Karl Kiefer Machine Co. (Filling Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
Mixing Equipment Co. (Tanks, Mixers)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Sprout, Waldron & Co. (Mixing, Conveying, etc)
Stokes & Smith Co. (Pkg. Machy.)

# Raw Material and Equipment Guide

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## MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.

## MISCELLANEOUS

American Colloid Co. (Bentonite)
American Standard Mfg. Co. (Wax Applicator)
Anchor-Hocking Glass Corp. (Metal Caps)
Dow Chemical Co. (Germicides, Agricultural Insecticides, **Fumigants)**
Filtrol Corp. (Purifying and Decolorizing Clay)
Garnet Chem. Corp. (Drip Machines)
General Petroleum Corp. (Naphthenic Acids)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Div. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants)
Koppers Company (Coal, Coke, Roofing Materials)
Pennsylvania Refining Co. (White Oils)
Pylam Products Co. (Lathering Agent)
S. Schwabacher & Co. (Naphthenic Soaps, White Mineral Oils)
Steryl Products Corp. (Toilet Deodorizer)

## OILS, FATS, AND FATTY ACIDS

Eastern Industries
Independent Mfg. Co.
Industrial Chemical Sales Div.
Leghorn Trading Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
Wecoline Products Co.
Welch, Holme & Clark Co.

## PARADICHLORBENZENE

John A. Chew, Inc.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Solvay Sales Corp.
Jos. Turner & Co.

## PERFUMING MATERIALS

Amer-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer Inc.
E. I. Du Pont de Nemours & Co.
Felton Chemical Corp.
Firmenich & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

## PETROLEUM PRODUCTS

**Deodorized Insecticide Base, White Oils, Petrolatum, Paraffine, Oils, etc.**

Atlantic Refining Co.
Pennsylvania Refining Co.
S. Schwabacher & Co.
L. Sonneborn Sons.

## PHOSPHATES

**Trisodium, Sodium Pyrophosphate, etc.**

American Cyanamid & Chemical Corp.
John A. Chew, Inc.
E. I. du Pont de Nemours & Co.
General Chemical Co.
Monsanto Chemical Works
Victor Chemical Works
Warner Chemical Co.

## PYRETHRUM AND DERRIS PRODUCTS

**Insect Flowers and Powder, Pyrethrum Extract, Derris Products**

Associated Chemists, Inc.
Derris, Inc.
S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.

## SILICATES

E. I. du Pont de Nemours & Co.
General Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

## SOAP DISPENSERS

Bobrick Mfg. Co.
Clifton Chemical Co.
Fuld Bros.
Garnet Chem. Corp.
Hockwald Chemical Co.

## SPRAYERS

Breuer Electric Mfg. Co. (Electric)
Dula Mfg. Co. (Steam Vaporizers)
Fumeral Co. (Spraying Systems)
Universal Metal Prods. Co.

## WAXES AND GUMS

**Carnauba, Shellac, Candelilla, etc.**

American Cyanamid & Chem. Corp.
General Dyestuff Corp. (Waxes)
Innis, Speiden & Co. (Waxes)
Mantrose Corp. (Shellac)
Twin City Shellac Co. (Shellac)

# Professional Directory

**Pease Laboratories, Inc.**
*Est.* 1904
39 West 38th Street — New York

Chemical, Bacteriological and Pathological Testing and Research. Special Animal Investigations of Pharmacologic, Toxic or Skin Irritating Properties.

H. A. SEIL, Ph.D — E. B. PUTT, Ph.C., B.Sc.
**SEIL, PUTT & RUSBY, INC.**
*Analytical and Consulting Chemists*
Specialists in the Analysis of Pyrethrum Flowers, Derris Root, Barbasco, or Cube Root—Their Concentrates and Finished Preparations
ESSENTIAL OILS — SOAP
16 East 34th Street, New York, N. Y.

**STILLWELL AND GLADDING, Inc.**
*Analytical and Consulting Chemists*
Members Association of
Consulting Chemists and Chemical Engineers
130 Cedar Street — New York City

**SOAPS — DETERGENTS**
*Analyses* — *Development*
*Consultation* — *Formulas*
**Hochstadter Laboratories**
INCORPORATED
254 West 31st St. — New York City

**KILLING**
strength of Insecticides
**by PEET GRADY METHOD**
(Official I. & D. code method) and
PYRETHRINS in PYRETHRUM FLOWERS
(by Gnadinger's Method)
*We raised and killed more than 1 million flies in the last 2 years*
ILLINOIS CHEMICAL LABORATORIES, INC.
5235 WEST 65th STREET — CHICAGO, ILL.

**CHARLES S. GLICKMAN**
***Consulting Chemist***
SPECIALIZING IN
Wax Polishes—Chemical Specialties
White Shoe Polishes—Floor Seals
*Plant Design — Formulas — New Products*
**220 Broadway** — **New York**
COrtlandt 7-3382

**FOSTER D. SNELL, INC.**
Chemists—Engineers
Every form of Chemical Service
305 WASHINGTON STREET — BROOKLYN, N. Y.

**Patents—Trade Marks**
All cases submitted given personal attention.
Form "Evidence of Conception" with instructions for use and "Schedule of Government and Attorneys' Fees"—Free
**Lancaster, Allwine & Rommel**
PATENT LAW OFFICES
Suite 402, Bowen Building — Washington, D. C.

**ALAN PORTER LEE, Inc.**
Contracting and Consulting Engineers
*Design and Construction of Equipment and Plants for Producing and Processing Fats, Oils, Soaps and Related Products*
136 LIBERTY STREET, NEW YORK, N. Y.
Cable Address: "ALPORTLE", New York

PATENTS AND TRADE MARKS
Patent and Protect Your Inventions.
Expert service. Prompt attention.
LESTER L. SARGENT
REGISTERED PATENT ATTORNEY
1115 K St., N. W., Washington, D. C.

**Skinner & Sherman, Inc.**
246 Stuart Street, Boston, Mass.
Bacteriologists and Chemists
Disinfectants tested for germicidal value or phenol co efficient by any of the recognized methods.
Research—Analyses—Tests

*Refer To Your 1939*
SOAP BLUE BOOK
for F.D.A. Method for Testing of Disinfectants.
Peet-Grady Method for Testing Insecticides.
MAC NAIR-DORLAND CO.
*Publishers*
254 W. 31st Street — New York, N. Y.

# Index to Advertisers

*For product classification see pages 133 and 134*

*For further details see announcement in 1939 SOAP BLUE BOOK


*American-British Chemical Supplies ... 116
American Can Co. ... 44
American Cyanamid & Chemical Corp. ... 48
American Standard Mfg. Co. ... 128
Anchor-Hocking Glass Corp. ... 4, 10, 11, 46
Aromatic Products, Inc. ... 87
Associated Chemists, Inc. ... 106
Atlantic Refining Co. ... Apr.

*Baird & McGuire, Inc. ... 92
Barrett Co. ... 50
Bobrick Mfg. Co. ... 40
Books ... 52
*Breuer Electric Mfg. Co. ... 104
Buckingham Wax Corp. ... 137

*Candy & Co. ... 98
Chemical Supply Co. ... 116, 132
John A. Chew, Inc. ... 118
*Clifton Chemical Co. ... 38
*Columbia Alkali Co. ... 12
Compagnie Parento ... 126
*Consolidated Products Co. ... 131
*Continental Can Co. ... Apr.

*Davies-Young Soap Co. ... 13
*Derris, Inc. ... Mar.
Diamond Alkali Co. ... Apr.
*Dodge & Olcott Co. ... 100
*Dow Chemical Co. ... Apr.
*P. R. Dreyer Inc. ... Apr.
Dula Mfg. Co. ... 114
*E. I. DuPont de Nemours Co. ... 7

Eastern Industries ... 34
*Electro Bleaching Gas Co. ... 16
Empire Chemical Prods. Co. ... 126

*Federal Varnish Co. ... 110
*Felton Chemical Co. ... 6, 85
Fezandie & Sperrle ... 126
Filtrol Corp. ... 122
*Firmenich & Co. ... Second Cover
Anthony J. Fries ... 120
Fritzsche Brothers, Inc. ... 42, 43
*Fuld Brothers ... 3
*Fumeral Co. ... 110

Garnet Chemical Corp. ... 106
*General Chemical Co. ... 9
*General Drug Co. ... 8
General Dyestuff Corp. ... Apr.
General Petroleum Corp. ... 120
*Givaudan-Delawanna, Inc. ... 77 & 3rd Cover
Charles S. Glickman ... 135

Harley Soap Co. ... 128
Hercules Powder Co. ... 88
*Hochstadter Laboratories ... 135
Hockwald Chemical Co. ... 124
R. M. Hollingshead Corp. ... Apr.
*Hooker Electrochemical Co. ... Apr.
*Houchin Machinery Co. ... 62
*Huber Machine Co. ... 137
*Hysan Products Co. ... 114

Illinois Chemical Labs. ... 135
Independent Mfg. Co. ... 122
*Industrial Chemical Sales Division
W. Va. Pulp & Paper Co. ... 56
*Innis-Speiden & Co. ... 52
R. A. Jones & Co. ... 18

Karl Kiefer Machine Co. ... Apr.
*Koppers Co. ... 76
Kranich Soap Co. ... 54

Lancaster, Allwine & Rommel ... 135
*A. P. Lee ... 135
*Leghorn Trading Co. ... Apr.

Magnus, Mabee & Reynard, Inc. ... 89
Mantrose Corp. ... Apr.
Manufacturing Chemist ... 66
*McCormick & Co. ... 91
McLaughlin Gormley King Co. ... 74, 75
Mirvale Chemical Co. ... 122
*Mixing Equipment Co. ... 68
Monsanto Chemical Corp. ... Fourth Cover
Murray Oil Prods. Co. ... 122

*National Can Co. ... 80
National Sanitary Chemical Co. ... 112
*Newman Tallow & Soap Machinery Co. ... 130
*Niagara Alkali Co. ... 16
Norda Essential Oil & Chemical Co. ... 81

*Orbis Products Co. ... Apr.
Owens-Illinois Glass Co. ... Apr.

*Pease Laboratories ... 135
Peck's Products Co. ... 124
S. B. Penick & Co. ... 78, 79
*Penn Refining Co. ... 118
Philadelphia Quartz Co. ... 64
*John Powell & Co. ... 71
R. J. Prentiss & Co. ... 72
*Proctor & Schwartz, Inc. ... 68
*Pylam Products Co. ... 126

*Reilly Tar & Chemical Co. ... 112
*Rohm & Haas Co. ... 84

*C. G. Sargent's Sons Corp. ... 50
Schimmel & Co., Inc. ... Apr.
George A. Schmidt & Co. ... 124
S. Schwabacher & Co. ... 122
Seil, Putt & Rusby ... 135
Shawmut Specialty Co. ... 128
*Skinner & Sherman ... 135
*Foster D. Snell ... 135
*Solvay Sales Corp. ... 82
*L. Sonneborn Sons ... Mar.
Sprout, Waldron & Co. ... 128
Standard Silicate Co. ... Apr.
Steryl Products Corp. ... 137
Stillwell & Gladding ... 135
*Stokes & Smith Co. ... Apr.

*Tar & Chem. Division Koppers Co. ... 76
Twi Laq Chemical Co. ... Apr.
Jos. Turner & Co. ... Apr.
Twin City Shellac Co. ... 120

*Uncle Sam Chemical Co. ... Apr.
*Ungerer & Co. ... Front Cover
Universal Metal Products Co. ... 108

*Van Ameringen-Haebler, Inc. ... 17, 73
*Victor Chemical Works ... 14, 15

*Warner Chemical Co. ... Apr.
*T. F. Washburn Co. ... 108
Wax Pol Laboratories ... Dec.
Wecoline Products Co. ... 137
*Welch, Holme & Clark Co. ... 54
*White Tar Co. of N. J. ... 76
*Whitmire Research Corp. ... 102
Wilson & Bennett Mfg. Co. ... 104
Windsor Wax Co. ... 131


*Every effort is made to keep this index free of errors, but no responsibility is assumed for any omission.*

"Before You Buy—Ask
WECOLINE"

Ask
About . . . .

DISTILLED FATTY ACIDS
AND REFINED OILS

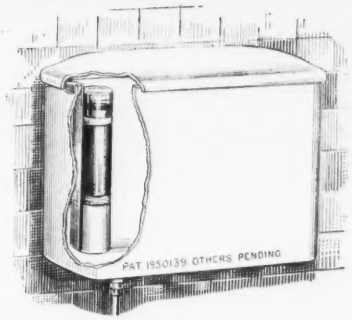
Coconut Oil—Palm Oil—Soya Bean—Linseed—White Olein—etc. . . . a large line of unusually pure and brilliant fatty acids. Also distilled fatty acids for specific uses in soaps, cosmetics, and resins.

Color, Purity, Distillation, Refining, Service . . . *everything but the price* . . . is of the highest.

WRITE FOR SPECIFICATIONS AND SAMPLES

**WECOLINE** Products, Inc. BOONTON, N.J.
Sales Offices: NEW YORK . . . . . CHICAGO . . . . . BOSTON

Distributors Wanted For
**Steryl-Flush**




CREATES NEW MARKET FOR YOUR PINE OIL
Concealed Guardian of the Modern Bath Room

STERYL-FLUSH deodorizes and keeps the entire toilet system clean.
Does not cover up offensive odors, but removes them completely.
STERYL-FLUSH fits inside the toilet tank where it operates unseen.
It operates only when the toilet is used by flow of water.
Non-corrosive and non-injurious to the hands, yet it has a phenol coefficient of 4.
Pleasantly scented with pure pine oil—just enough to give the bath room a faint, cleanly odor of careful attention to sanitation.

SOLD EMPTY OR FILLED

**Steryl Products Corp.**
112 S. 16th STREET PHILADELPHIA, PA.

# Buckingham

FLOOR WAXES
GYM FINISH
FLOOR SEALERS

* * * *

Made to Suit Every Requirement

* * * *

Backed by more than 25 years experience in wax manufacturing

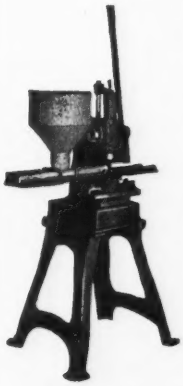
* * * *

Furnished under your own label. (We print the label).

*SEND FOR SAMPLES AND QUOTATIONS TODAY*

**Buckingham Wax Corp.**
VAN DAM STREET AND BORDEN AVENUE
LONG ISLAND CITY NEW YORK

*for* low cost *in*
para block
*manufacture*



These two practical machines are all you need to produce high quality para blocks or cakes. The small machine will thoroughly mix all ingredients.

The large machine will compress the mixture into any shape dies can give.

In addition, the mixer can be used on other dry products such as roach powder, cleansers, bath salts, etc. It will also give a smooth, soft and velvety texture to creams. The hand lever press has more power than cheap foot presses. Send us some of your material and let us show you some specimen cakes.

**HUBER MACHINE CO.**
265 46th Street, Brooklyn, N. Y.
*Makers of Good Soap Machinery for Forty Years*

*"Step on the gas, Cuthbert! Since the old man started advertising in those trade papers, our production is running way behind the sales department."*

# Step on the gas!

**THERE is no time like the present to give your sales department that much needed boost in the direction of more business. Since Hector was a pup, the tried and tested means of selling more goods to American industry has been through specialized papers catering solely to the needs of industry, — our American business papers.**

**If you want to give your sales department that needed boost in the field of soap products, insecticides, disinfectants, chemical specialties, and sanitary products, experience proves that you can really "step on the gas" by advertising in**

**SOAP** *and Sanitary Chemicals*

**254 WEST 31st STREET NEW YORK**

*Member of the A.B.C. and A.B.P.*

## Tale Ends

SOME of our readers have, upon occasion, objected to the term "soaper" being applied by us to a soap manufacturer or a man in the soap business. However, inasmuch as the term is common parlance in the industry, we have continued to use it, conscious nevertheless of our critics. Imagine our surprise when we read in the last issue of our dignified and well-known contemporary in England, *Soap, Perfumery and Cosmetics*, the term "soapery" as designating a soap plant. It made us feel much better.

* * *

"World's Fair buys 2,500 live flies daily," says the news of the day. But these flies, dear reader, are very special flies,—the elite of the fly tribe, reared under the gentle care of entomologists. And every day, 2,500 of them go to the Fair only to be killed off in a baby-size Peet-Grady chamber to show Mr. and Mrs. Public what a good insecticide will and should do. It's all a part of the Du Pont exhibit.

* * *

Let this be a warning to you! If you pay out your good money to some solicitor for a subscription to *Soap & Sanitary Chemicals*, remember that he is a crook. When he shows you a printed receipt with our name on it, remember that's a counterfeit. Pay no money to any solicitor saying he represents this paper. There is no such animal. Our subscriptions are handled only direct by us with our subscribers.

* * *

The only place in captivity where all the recognized methods, both chemical and biological, for the analysis and evaluation of pyrethrum products and liquid spray insecticides, are included in one book . . . the 1939 *Blue Book*. Did you get yours?